

LORID

ORIGINAL
(Red)

Lord Corporation
Chemical Products Group
2000 West Grandview Blvd.
P. O. Box 10038
Erie, Pa. 16514-0038
Telephone: 814:868-3611
Telex: 91-4445



SDMS DocID 2236122

Metro Container Corp.
P. O. Box A
Trainer, PA 19016

February 18, 1987

Gentlemen:

Attached are the Material Safety Data Sheet (MSDS) form(s)
you recently requested on:

TYCEL 7914

The MSDS form(s) on each of our product(s) is an essential part of the new OSHA Communication Standard (29CFR 1900.1200) which has an effective date of November 25, 1985. The information on the form(s) will help provide you with the information you need to establish a training program and maintain records to provide a safe workplace environment under the OSHA Standard.

If you have any questions or concerns regarding this standard and the use of our MSDS form(s), please contact us immediately.

Sincerely,

Douglas H. Green, Manager
Business Services Department

/slh

RECEIVED
MAR - 3 1987
Metro Container Corp.

MATERIAL SAFETY DATA SHEET

ORIGINAL
(Red)

DATE: 08/29/85 REV: LA 80 MSDS NUMBER: E. C. Gustin COMPILED BY: D. H. Green APPROVED BY:

PRODUCT IDENTIFICATION

TYCEL 7914 Urethane Adhesive

PRODUCT CLASS

Adhesives, Laminating

SECTION I

MANUFACTURER'S NAME: Lord Corporation
Chemical Products Group
STREET ADDRESS: 2000 West Grandview Blvd
P. O. Box 10038
CITY, STATE AND ZIP CODE: Erie PA 16514-0038

EMERGENCY TELEPHONE NO.: 814-763-2345 (State
"EMERGENCY" - Ask for
"Safety Engineer")
INFORMATION TELEPHONE NO.: 814-868-3611 (Ask for
"Business Services")

SECTION II - HAZARDOUS INGREDIENTS

Chemical Name	INGREDIENT Common Name	CAS Number	PERCENT (Wt.)	OCCUPATIONAL EXPOSURE LIMITS	LEL (% by Vol)	VAPOR PRESSURE (mm Hg)
Ethyl Acetate	Ethyl ethanoate	141-78-6	40	400ppm 1400mg/m ³ (TWA-ACGIH & OSHA)	2.2	76/20°C
Free Methylene Bisphenyl Isocyanate	MDI	101-68-8	< 2	.02 ppm 2 mg/m ³ Ceiling (ACGIH)	Not Applicable	<.01/20°C

SECTION III - PHYSICAL DATA

BOILING RANGE: 169-172°F 76-77°C VAPOR DENSITY: ☒ Heavier than Air ☐ Lighter than Air
EVAPORATION RATE: ☐ Faster ☒ Slower, than Ether PERCENT VOLATILE BY VOLUME: 46
SOLUBLE IN WATER: ☐ Yes ☒ No WEIGHT PER GALLON: 8.7

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLAMMABILITY CLASSIFICATION: OSHA Flammable Liquid - Class IB DOT Flammable Liquid
FLASH POINT: 28°F -2°C LEL: 2.2 UN 1133 Adhesive, Flammable
EXTINGUISHING MEDIA: ☒ Foam ☒ Alcohol Foam ☒ CO₂ ☒ Dry Chemical ☒ Water Fog ☒ Halon 1211

UNUSUAL FIRE AND EXPLOSION HAZARDS: Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame. Closed containers may explode when exposed to extreme heat.

DECOMPOSITION PRODUCTS: CO, CO₂, nitrogen oxides, monomeric isocyanates, traces of HCN.

SPECIAL FIRE FIGHTING PROCEDURES: Full protective equipment, including self-contained breathing apparatus should be used. Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure buildup and possible auto ignition or explosion.

SI10-8000-1

SECTION V - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE:

ACUTE (Short Term): Anesthetic. Irritation of the respiratory tract or central nervous system depression characterized by the following progressive steps: headache, dizziness, staggering gait, confusion, unconsciousness or coma.

CHRONIC (Long Term): Permanent central nervous system changes can occur due to solvent exposure.

MEDICAL CONDITIONS PRONE TO AGGRAVATION BY EXPOSURE: Respiratory allergies. Chronic diseases of the skin, eyes, throat and lungs.

PRIMARY ROUTES OF ENTRY: ☐ Dermal ☒ Inhalation ☒ Ingestion

EMERGENCY AND FIRST AID PROCEDURES: **INHALATION:** Move person to fresh air. Restore breathing. Treat symptomatically. Consult a physician. **SPLASH (EYES):** Flush eyes immediately with large amounts of water for at least 15 minutes. Take to a physician for medical treatment. **INGESTION:** Drink one or two glasses of water to dilute. Do not induce vomiting. Consult physician or poison control center immediately. Treat symptomatically. **INHALATION:** Remove person to fresh air.

SECTION VI - REACTIVITY DATA

STABILITY: ☐ Unstable ☒ Stable **HAZARDOUS POLYMERIZATION:** ☐ May Occur ☒ Will Not Occur

CONDITIONS TO AVOID: High temperatures.

INCOMPATIBILITY (Materials to Avoid): Ammonia, halogens, acids, caustics, amines, materials containing reactive hydrogen sites.

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Remove all sources of ignition (flame, hot surfaces, and electrical, static or frictional sparks). Avoid breathing vapors. Use self-contained breathing equipment. Ventilate area. Contain and remove with inert absorbent material and non-sparking tools.

WASTE DISPOSAL METHOD: Disposal should be done in accordance with Federal (40CFR Part 261), State and Local regulations. Before attempting clean-up, refer to hazard caution information in other sections of the MSDS form. Use licensed hazardous waste disposal concern.

SECTION VIII - SAFE HANDLING AND USE PROCEDURES

RESPIRATORY PROTECTION: Use approved chemical filtering respirators designed to remove organic vapor.

VENTILATION: Sufficient ventilation, in pattern and volume, should be provided to keep the air contaminant concentration below applicable exposure limits. Heavy solvent vapors should be removed from the lower levels of work area, and all ignition sources (non-explosion proof equipment) should be eliminated if flammable/air mixtures will be encountered. All application areas should be ventilated in accordance with OSHA regulation 29CFR Part 1910.94.

PROTECTIVE GLOVES: Use neoprene or rubber gloves to prevent skin contact.

EYE PROTECTION: Use safety glasses with side shields as minimum protection.

OTHER PROTECTIVE EQUIPMENT: Use disposable or impervious clothing if work clothing contamination is likely. Discard contaminated shoes. Use protective cream if skin contact is likely.

HYGIENIC PRACTICES: Wash hands before eating, smoking or using the wash room. Do not smoke in any chemical handling or storage area. Food or beverages should not be consumed anywhere this product is handled or stored.

SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: Do not store or use near heat or open flame. Refer to OSHA 29CFR Part 1910.106 for specific storage requirements. Keep closure tight and container upright to prevent leakage.

OTHER PRECAUTIONS: Drums of this material should be grounded and bonded when pouring. Empty drums should not be reused. Prevent prolonged or repeated breathing of vapor or spray mists. Do not handle until the manufacturer's safety precautions have been read and understood. Do not weld or flame-cut an empty drum. Can cause allergic respiratory reaction. Do not get in eyes.

MATERIAL SAFETY DATA SHEET

ENERGOL IC-HF 303, IC-HF 304

ORIGINAL

(Red)

MARKETED BY:

THE STANDARD OIL COMPANY (OHIO)
BORON OIL COMPANY
BP OIL INC.
Midland Building
Cleveland, Ohio 44115

CORPORATE EMERGENCY TELEPHONE (Toll-Free)

FROM WITHIN OHIO: 800-362-8059
FROM OUTSIDE OHIO: 800-321-8642
CHEMTREC (CMA): 800-424-9300

DESCRIPTION

CHEMICAL NAME: Petroleum Oil **CAS REGISTRY NO.:** Mixture
SYNONYMS: Internal combustion engine oil for engines burning heavy fuels
CHEMICAL FAMILY: hydrocarbons **FORMULA:** Refined petroleum oil plus additives
COMPOSITION: Solvent refined paraffinic base oil and naphthenic coastal base oil blend plus methacrylate polymer pour depressant, calcium phenate, and a calcium sulfonate, zinc dithiophosphate, succinimide combined inhibitor/detergent/dispersant package. The blended oil contains not more than 0.2% zinc, 0.2% phosphorus, 1.5% calcium.

STATEMENT OF HEALTH HAZARD

HAZARD DESCRIPTION: No acute effects from incidental contact with new oil. Skin dryness, irritation, dermatitis from excessive prolonged or repeated contacts. Danger of serious pneumonitis from aspiration into lungs if swallowed.
EXPOSURE LIMITS: Oil mist: 5 mg/m³ TLV (8 hour time weighted average exposure; OSHA 29 CFR 1910.1000 Table Z-1). Avoid unnecessary exposure to liquid oil.

EMERGENCY TREATMENT

EFFECTS OF OVEREXPOSURE: Excessive prolonged or repeated contact may dry skin, cause irritation, dermatitis, lesions. Allergic reaction may occur with a few individuals. Swallowing liquid oil may cause discomfort but no lasting effects. Liquid oil aspirated into lungs may cause dangerous chemical pneumonitis with increasing difficulty in breathing. This effect may be delayed.

EMERGENCY AID: Eyes: wash with copious water for 15 minutes. Eyelids should be held apart and away from eyeball to ensure thorough rinsing. Skin: wash thoroughly with soap and water. Change all contaminated clothing; shower at earliest convenience. Swallowing: DO NOT INDUCE VOMITING BECAUSE OF DANGER OF ASPIRATING OIL INTO LUNGS. After spontaneous vomiting, monitor for breathing difficulty. Refer to physician. IF SYMPTOMS PERSIST OR EXPOSURE IS SEVERE, SEEK PROMPT MEDICAL HELP.

NOTE TO PHYSICIAN: Petroleum aspiration may cause severe pneumonitis ('oil pneumonia'). Vomiting should not be induced, and gastric lavage should be undertaken with consideration of endotracheal intubation, especially with an unconscious patient.

PHYSICAL DATA

BOILING PT.: (Initial) 680°F	POUR PT.: 0°F
VAPOR PRESSURE: @ 100°F: Negligible	VAPOR DENSITY (Air=1): Heavier than air
SPECIFIC GRAVITY: @ 60°F: 0.910	SOLUBILITY IN WATER: Negligible
PERCENT VOLATILE: @ 100°F: 0%	EVAPORATION RATE (Water=1): Very slow
APPEARANCE AND ODOR: Dark clear and bright liquid with petroleum odor.	

FIRE AND EXPLOSION HAZARD DATA

FLASH POINT: (ASTM D-92) 430°F **AUTOIGNITION TEMP.:** Not known
FLAMMABLE LIMITS IN AIR: Not known
EXTINGUISHING MEDIA: Carbon dioxide, foam, dry chemicals, sand or earth, water fog.
SPECIAL FIRE-FIGHTING PROCEDURES: Avoid breathing fumes, wear adequate respiratory protection. Do not spray water directly into fire to avoid foaming or spread of floating oil. Use water to cool threatened containers. Product is a Class IIIB Combustible Liquid (OSHA 29 CFR 1910.106). Fires involving product are Class B fires (OSHA 29 CFR 1910.156).
UNUSUAL FIRE AND EXPLOSION HAZARDS: None

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CHEMICAL REACTIVITY

STABILITY: Stable under normal conditions. Not chemically reactive.
CONDITIONS TO AVOID: Contact with strong oxidizers (peroxides, chlorine, oxygen under pressure, strong oxidizing acids), extreme heat or sources of ignition.
HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide, carbon dioxide from combustion. Reactive volatile hydrocarbons from thermal decomposition.

SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN: Eliminate all sources of ignition. Contain spill. Recover liquid by mopping, vacuum, or absorbent. Avoid unnecessary contact with liquid by use of oil-impervious gloves, boots, or other protective clothing as needed.

WASTE DISPOSAL: Deposit recovered oil in waste oil system, incinerate under approved conditions, or transfer oil to approved re-refiner. Contaminated absorbent and diking solids may be put in approved landfill. Deposit of liquid in landfill is strictly regulated (40 CFR 65.314).

SPECIAL PROTECTION AND PROCEDURES

RESPIRATORY PROTECTION: Not needed in normal use. A cartridge respirator for oil mist may be used where misting is a problem.

VENTILATION: Local or mechanical ventilation sufficient to control mist below TLV level. Check for possible ignition sources.

PROTECTIVE EQUIPMENT: Not needed in normal use. Barrier creams, oil-impervious gloves and sleeves or other protective gear, including eye shield, may be used to reduce chances of contact.

SPECIAL PRECAUTIONS

HANDLING AND STORING: Avoid extremes of temperature in storage. Store away from sources of ignition. Avoid contamination. Do not store in unlabeled containers.

WORKPLACE: Practice good housekeeping. Clean up spills promptly to avoid slippery footing. Have needed protective equipment and fire extinguisher available. Check operations for possible ignition sources.

DISPOSAL: Used oil must be disposed of in an environmentally acceptable manner. See WASTE DISPOSAL. Do not put oil into sewer system or use as road oil or for other use which may result in uncontrolled release.

PERSONAL: Good personal hygiene is most important. Keep clean. Do not continue to wear oil-soaked leather goods. Wash before eating. Use emollient cream to counter dry skin if needed.

LABELING AND SHIPPING

HAZARD CLASS: None

PROPER SHIPPING NAME: Lubricating Oil (Motor); Petroleum Lubricating Oil (Rail)

PLACARD: None

STCC NO.: 2911415

LABEL: None

IDENTIFICATION NO.: None

OTHER REGULATORY REQUIREMENTS

Any environmental release which introduces oil into public waterways (sufficient to produce an oil sheen) must be reported promptly to the National Response Center, U.S. Coast Guard, Washington, D.C. (1-800-424-8802) (FWPCA §311(b)(3)).

REVISION DATE: 11/6/81

REPLACING DATE OF: New Issue

PRODUCT CODES: P 3443, P 3444

REVIEWED BY: PJF/WMD/ECP/RAR/CWS/WJW/SMD

APPROVED: 

TITLE: Product Safety Coordinator

MATERIAL SAFETY DATA SHEET

ENERGOL IC-HF 253, IC-HF 254

ORIGINAL
(Red)**MARKETED BY:**

THE STANDARD OIL COMPANY (OHIO)

BORON OIL COMPANY

BP OIL INC.

Midland Building

Cleveland, Ohio 44115

CORPORATE EMERGENCY TELEPHONE (Toll-Free)

FROM WITHIN OHIO: 800-362-8059

FROM OUTSIDE OHIO: 800-321-8642

CHEMTREC (CMA): 800-424-9300

DESCRIPTION**CHEMICAL NAME:** Petroleum Oil**CAS REGISTRY NO.:** Mixture**SYNONYMS:** Internal combustion engine oil for engines burning heavy fuels**CHEMICAL FAMILY:** Hydrocarbons**FORMULA:** Refined petroleum oil plus additives**COMPOSITION:** Solvent refined paraffinic base oil and naphthenic coastal base oil blend plus methacrylate polymer viscosity index improver and calcium sulfonate, zinc dithiophosphate, succinimide combined inhibitor/detergent/dispersant package. The blended oil contains not more than 0.2% zinc, 0.2% phosphorus, 2.0% calcium.**STATEMENT OF HEALTH HAZARD****HAZARD DESCRIPTION:** No acute effects from incidental contact with new oil. Skin dryness, irritation, dermatitis from excessive prolonged or repeated contacts. Danger of serious pneumonitis from aspiration into lungs if swallowed.**EXPOSURE LIMITS:** Oil mist: 5 mg/m³ TLV (8 hour time weighted average exposure; OSHA 29 CFR 1910.1000 Table Z-1). Avoid unnecessary exposure to liquid oil.**EMERGENCY TREATMENT****EFFECTS OF OVEREXPOSURE:** Excessive prolonged or repeated contact may dry skin, cause irritation, dermatitis, lesions. Allergic reaction may occur with a few individuals. Swallowing liquid oil may cause discomfort but no lasting effects. Liquid oil aspirated into lungs may cause dangerous chemical pneumonitis with increasing difficulty in breathing. This effect may be delayed.**EMERGENCY AID:** Eyes: wash with copious water for 15 minutes. Eyelids should be held apart and away from eyeball to ensure thorough rinsing. Skin: wash thoroughly with soap and water. Change all contaminated clothing; shower at earliest convenience. Swallowing: DO NOT INDUCE VOMITING BECAUSE OF DANGER OF ASPIRATING OIL INTO LUNGS. After spontaneous vomiting, monitor for breathing difficulty. Refer to physician. IF SYMPTOMS PERSIST OR EXPOSURE IS SEVERE, SEEK PROMPT MEDICAL HELP.**NOTE TO PHYSICIAN:** Petroleum aspiration may cause severe pneumonitis ('oil pneumonia'). Vomiting should not be induced, and gastric lavage should be undertaken with consideration of endotracheal intubation, especially with an unconscious patient.**PHYSICAL DATA****BOILING PT.:** (Initial) 680°F**POUR PT.:** 0°F**VAPOR PRESSURE:** @ 100°F: Negligible**VAPOR DENSITY (Air=1):** Heavier than air**SPECIFIC GRAVITY:** @ 60°F: 0.915**SOLUBILITY IN WATER:** Negligible**PERCENT VOLATILE:** @ 100°F: 0%**EVAPORATION RATE (Water=1):** Very slow**APPEARANCE AND ODOR:** Dark clear and bright liquid with petroleum odor.**FIRE AND EXPLOSION HAZARD DATA****FLASH POINT:** (ASTM D-92) 430°F**AUTOIGNITION TEMP.:** Not known**FLAMMABLE LIMITS IN AIR:** Not known**EXTINGUISHING MEDIA:** Carbon dioxide, foam, dry chemicals, sand or earth, water fog.**SPECIAL FIRE-FIGHTING PROCEDURES:** Avoid breathing fumes, wear adequate respiratory protection. Do not spray water directly into fire to avoid foaming or spread of floating oil.

Use water to cool threatened containers. Product is a Class IIIB Combustible Liquid (OSHA 29 CFR 1910.106). Fires involving product are Class B fires (OSHA 29 CFR 1910.156).

UNUSUAL FIRE AND EXPLOSION HAZARDS: None

CHEMICAL REACTIVITY

STABILITY: Stable under normal conditions. Not chemically reactive.
CONDITIONS TO AVOID: Contact with strong oxidizers (peroxides, chlorine, oxygen under pressure, strong oxidizing acids), extreme heat or sources of ignition.
HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide, carbon dioxide from combustion. Reactive volatile hydrocarbons from thermal decomposition.

SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN: Eliminate all sources of ignition. Contain spill. Recover liquid by mopping, vacuum, or absorbent. Avoid unnecessary contact with liquid by use of oil-impervious gloves, boots, or other protective clothing as needed.
WASTE DISPOSAL: Deposit recovered oil in waste oil system, incinerate under approved conditions, or transfer oil to approved re-refiner. Contaminated absorbent and diking solids may be put in approved landfill. Deposit of liquid in landfill is strictly regulated (40 CFR 265.314).

SPECIAL PROTECTION AND PROCEDURES

RESPIRATORY PROTECTION: Not needed in normal use. A cartridge respirator for oil mist may be used where misting is a problem.
VENTILATION: Local or mechanical ventilation sufficient to control mist below TLV level. Check for possible ignition sources.
PROTECTIVE EQUIPMENT: Not needed in normal use. Barrier creams, oil-impervious gloves and sleeves or other protective gear, including eye shield, may be used to reduce chances of contact.

SPECIAL PRECAUTIONS

HANDLING AND STORING: Avoid extremes of temperature in storage. Store away from sources of ignition. Avoid contamination. Do not store in unlabeled containers.
WORKPLACE: Practice good housekeeping. Clean up spills promptly to avoid slippery footing. Needed protective equipment and fire extinguisher available. Check operations for possible ignition sources.
DISPOSAL: Used oil must be disposed of in an environmentally acceptable manner. See WASTE DISPOSAL. Do not put oil into sewer system or use as road oil or for other use which may result in uncontrolled release.
PERSONAL: Good personal hygiene is most important. Keep clean. Do not continue to wear oil-soaked leather goods. Wash before eating. Use emollient cream to counter dry skin if needed.

LABELING AND SHIPPING

HAZARD CLASS: None
PROPER SHIPPING NAME: Lubricating Oil (Motor); Petroleum Lubricating Oil (Rail)
PLACARD: None
STCC NO.: 2911415
LABEL: None
IDENTIFICATION NO.: None

OTHER REGULATORY REQUIREMENTS

Any environmental release which introduces oil into public waterways (sufficient to produce an oil sheen) must be reported promptly to the National Response Center, U.S. Coast Guard, Washington, D.C. (1-800-424-8802) (FWPCA §311(b)(3)).

REVISION DATE: 11/6/81
REPLACING DATE OF: New Issue
PRODUCT CODES: P 3455, P 3456

REVIEWED BY: PJR/WDN/ECP/RAR/CWS/WJW/SMD
APPROVED: 
TITLE: Product Safety Coordinator

MATERIAL SAFETY DATA SHEET

ENERGOL HP-68-C, HP-100-C, HP-220-C

ORIGINAL
(Red)**MARKETED BY:**

THE STANDARD OIL COMPANY (OHIO)
BORON OIL COMPANY
BP OIL INC.
Midland Building
Cleveland, Ohio 44115

CORPORATE EMERGENCY TELEPHONE (Toll-Free)
FROM WITHIN OHIO: 800-362-8059
FROM OUTSIDE OHIO: 800-321-8642
CHEMTREC (CMA): 800-424-9300

DESCRIPTION

CHEMICAL NAME: Petroleum Oil
SYNONYMS: Slide & Way/Dripless Oils
CHEMICAL FAMILY: Hydrocarbons
COMPOSITION: Solvent refined paraffinic base oil blend plus an isobutylene polymer, a benzotriazole derivative, and sulfur-phosphorus anti-wear, antioxidant ashless additive package. the blended oil contains not more than 0.8% sulfur.

CAS REGISTRY NO.: Mixture**FORMULA:** Refined petroleum oil plus additives**STATEMENT OF HEALTH HAZARD**

HAZARD DESCRIPTION: No acute effects from incidental contact with new oil. Skin dryness, irritation, dermatitis from excessive prolonged or repeated contacts. Danger of serious pneumonitis from aspiration into lungs if swallowed.

EXPOSURE LIMITS: Oil mist: 5 mg/m³ TLV (8 hour time weighted average exposure; OSHA 29 CFR 1910.1000 Table Z-1). Avoid unnecessary exposure to liquid oil.

EMERGENCY TREATMENT

EFFECTS OF OVEREXPOSURE: Excessive prolonged or repeated contact may dry skin, cause irritation, dermatitis, lesions. Allergic reaction may occur with a few individuals. Swallowing liquid oil may cause discomfort but no lasting effects. Liquid oil aspirated into lungs may cause dangerous chemical pneumonitis with increasing difficulty in breathing. This effect may be delayed.

EMERGENCY AID: Eyes: wash with copious water for 15 minutes. Eyelids should be held apart and away from eyeball to ensure thorough rinsing. Skin: wash thoroughly with soap and water. Change all contaminated clothing; shower at earliest convenience. Swallowing: DO NOT INDUCE VOMITING BECAUSE OF DANGER OF ASPIRATING OIL INTO LUNGS. After spontaneous vomiting, monitor for breathing difficulty. Refer to physician. IF SYMPTOMS PERSIST OR EXPOSURE IS SEVERE, SEEK PROMPT MEDICAL HELP.

NOTE TO PHYSICIAN: Petroleum aspiration may cause severe pneumonitis ('oil pneumonia'). Vomiting should not be induced, and gastric lavage should be undertaken with consideration of endotracheal intubation, especially with an unconscious patient.

PHYSICAL DATA

BOILING PT.: (Initial) 750°F or higher
VAPOR PRESSURE: @ 100°F: less than 0.1 mm Hg
SPECIFIC GRAVITY: @ 60°F: 0.875 - 0.886
PERCENT VOLATILE: @ 100°F: 0%
APPEARANCE AND ODOR: Orange red to dark red liquid with "petroleum oil" odor.

POUR PT.: -15° to 0°F**VAPOR DENSITY (Air=1):** Heavier than air**SOLUBILITY IN WATER:** Negligible**EVAPORATION RATE (Water=1):** Very slow**FIRE AND EXPLOSION HAZARD DATA****FLASH POINT:** (ASTM D-92) 425°F - 440°F**AUTOIGNITION TEMP.:** Not known**FLAMMABLE LIMITS IN AIR:** Not known**EXTINGUISHING MEDIA:** Carbon dioxide, foam, dry chemicals, sand or earth, water fog.

SPECIAL FIRE-FIGHTING PROCEDURES: Avoid breathing fumes, wear adequate respiratory protection. Do not spray water directly into fire to avoid foaming or spread of floating oil. Use water to cool threatened containers. Product is a Class IIIB Combustible Liquid (OSHA 29 CFR 1910.106). Fires involving product are Class B fires (OSHA 29 CFR 1910.156).

UNUSUAL FIRE AND EXPLOSION HAZARDS: None

CHEMICAL REACTIVITY

STABILITY: Stable under normal conditions. Not chemically reactive.

CONDITIONS TO AVOID: Contact with strong oxidizers (peroxides, chlorine, oxygen under pressure, strong oxidizing acids), extreme heat or sources of ignition.

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide, carbon dioxide, traces of sulfur oxides from combustion. Reactive volatile hydrocarbons, traces of hydrogen sulfide from thermal decomposition.

SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN: Eliminate all sources of ignition. Contain spill. Recover liquid by mopping, vacuum, or absorbent. Avoid unnecessary contact with liquid by use of oil-impervious gloves, boots, or other protective clothing as needed.

WASTE DISPOSAL: Deposit recovered oil in waste oil system, incinerate under approved conditions, or transfer oil to approved re-refiner. Contaminated absorbent and diking solids may be put in approved landfill. Deposit of liquid in landfill is strictly regulated (40 CFR 265.314).

SPECIAL PROTECTION AND PROCEDURES

RESPIRATORY PROTECTION: Not needed in normal use. A cartridge respirator for oil mist may be used where misting is a problem.

VENTILATION: Local or mechanical ventilation sufficient to control mist below TLV level. Check for possible ignition sources.

PROTECTIVE EQUIPMENT: Not needed in normal use. Barrier creams, oil-impervious gloves and sleeves or other protective gear, including eye shield, may be used to reduce chances of contact.

SPECIAL PRECAUTIONS

HANDLING AND STORING: Avoid extremes of temperature in storage. Store away from sources of ignition. Avoid contamination. Do not store in unlabeled containers.

WORKPLACE: Practice good housekeeping. Clean up spills promptly to avoid slippery footing. Have needed protective equipment and fire extinguisher available. Check operations for possible ignition sources.

DISPOSAL: Used oil must be disposed of in an environmentally acceptable manner. See WASTE DISPOSAL. Do not put oil into sewer system or use as road oil or for other use which may result in uncontrolled release.

PERSONAL: Good personal hygiene is most important. Keep clean. Do not continue to wear oil-soaked leather goods. Wash before eating. Use emollient cream to counter dry skin if needed.

LABELING AND SHIPPING

HAZARD CLASS: None

PROPER SHIPPING NAME: Lubricating Oil (Motor); Petroleum Lubricating Oil (Rail)

PLACARD: None

LABEL: None

STCC NO.: 2911415

IDENTIFICATION NO.: None

OTHER REGULATORY REQUIREMENTS

Any environmental release which introduces oil into public waterways (sufficient to produce an oil sheen) must be reported promptly to the National Response Center, U.S. Coast Guard, Washington, D.C. (1-800-424-8802) (FWPCA §311(b)(3)).

REVISION DATE: 11/20/81

REPLACING DATE OF: Undated OSHA-20

PRODUCT CODES: P 3313, P 3314, P 3315

REVIEWED BY: PJR/WM/ECP/RAR/WJW/SMD

APPROVED: 

TITLE: Product Safety Coordinator

MATERIAL SAFETY DATA SHEETENERGOL HL 22, 32, 46, 68, 100, 220 ORIGINAL
(Red)**MARKETED BY:**

THE STANDARD OIL COMPANY (OHIO)
BORON OIL COMPANY
BP OIL INC.
Midland Building
Cleveland, Ohio 44115

CORPORATE EMERGENCY TELEPHONE (Toll-Free)
FROM WITHIN OHIO: 800-362-8059
FROM OUTSIDE OHIO: 800-321-8642
CHEMTREC (CMA): 800-424-9300

DESCRIPTION

CHEMICAL NAME: Petroleum Oil CAS REGISTRY NO.: Mixture
SYNONYMS: R and O Oil, Multi-purpose Lubricating and Hydraulic Oil
CHEMICAL FAMILY: Hydrocarbons FORMULA: Refined petroleum oil plus additives
COMPOSITION: Solvent refined paraffinic base oil blend plus additive package containing rust inhibitor, antioxidant, antifoam, and methacrylate polymer pour depressant.

STATEMENT OF HEALTH HAZARD

HAZARD DESCRIPTION: No acute effects from incidental contact with new oil. Skin dryness, irritation, dermatitis from excessive prolonged or repeated contacts. Danger of serious pneumonitis from aspiration into lungs if swallowed.
EXPOSURE LIMITS: Oil mist: 5 mg/m³ TLV (8 hour time weighted average exposure; OSHA 29 CFR 1910.1000 Table Z-1). Avoid unnecessary exposure to liquid oil.

EMERGENCY TREATMENT

EFFECTS OF OVEREXPOSURE: Excessive prolonged or repeated contact may dry skin, cause irritation, dermatitis, lesions. Allergic reaction may occur with a few individuals. Swallowing liquid oil may cause discomfort but no lasting effects. Liquid oil aspirated into lungs may cause dangerous chemical pneumonitis with increasing difficulty in breathing. This effect may be delayed.
EMERGENCY AID: Eyes: wash with copious water for 15 minutes. Eyelids should be held apart and away from eyeball to ensure thorough rinsing. Skin: wash thoroughly with soap and water. If skin exposure was directly from high pressure jet get immediate medical attention as oil may be driven through skin. Otherwise use emollient cream if needed. Change all contaminated clothing; shower at earliest convenience. Swallowing: DO NOT INDUCE VOMITING BECAUSE OF DANGER OF ASPIRATING OIL INTO LUNGS. After spontaneous vomiting, monitor for breathing difficulty. Refer to physician. IF SYMPTOMS PERSIST OR EXPOSURE IS SEVERE, SEEK PROMPT MEDICAL HELP.
NOTE TO PHYSICIAN: Petroleum aspiration may cause severe pneumonitis ('oil pneumonia'). Vomiting should not be induced, and gastric lavage should be undertaken with consideration of endotracheal intubation, especially with an unconscious patient.

PHYSICAL DATA

BOILING PT.: (Initial) 700°F or above POUR PT.*: -25°/-25°/-25°/-20°/-5°/0°F
VAPOR PRESSURE: @ 100°F: less than 0.1 mm Hg VAPOR DENSITY (Air=1): Heavier than air
SPECIFIC GRAVITY: @ 60°F: 0.865 to 0.887 SOLUBILITY IN WATER: Negligible
PERCENT VOLATILE: @ 100°F: 0% EVAPORATION RATE (Water=1): Very slow
APPEARANCE AND ODOR: Pale yellow to orange liquid with "petroleum oil" odor.
*Property listed in order by grade (22 thru 220).

FIRE AND EXPLOSION HAZARD DATA

FLASH POINT*: (ASTM D-92) 380°/400°/410°/445°/490°/500°F AUTOIGNITION TEMP.: Not known

FLAMMABLE LIMITS IN AIR: Not known

EXTINGUISHING MEDIA: Carbon dioxide, foam, dry chemicals, sand or earth, water fog.

SPECIAL FIRE-FIGHTING PROCEDURES: Avoid breathing fumes, wear adequate respiratory protection. Do not spray water directly into fire to avoid foaming or spread of floating oil. Use water to cool threatened containers. Product is a Class IIIB Combustible Liquid (OSHA 29 CFR 1910.106). Fires involving product are Class B fires (OSHA 29 CFR 1910.156).

UNUSUAL FIRE AND EXPLOSION HAZARDS: None

CHEMICAL REACTIVITY

STABILITY: Stable under normal conditions. Not chemically reactive.

CONDITIONS TO AVOID: Contact with strong oxidizers (peroxides, chlorine, oxygen under pressure, strong oxidizing acids), extreme heat or sources of ignition.

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide, carbon dioxide from combustion. Reactive volatile hydrocarbons from thermal decomposition.

SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN: Eliminate all sources of ignition. Contain spill. Recover liquid by mopping, vacuum, or absorbent. Avoid unnecessary contact with liquid by use of oil-impervious gloves, boots, or other protective clothing as needed.

WASTE DISPOSAL: Deposit recovered oil in waste oil system, incinerate under approved conditions, or transfer oil to approved re-refiner. Contaminated absorbent and diking solids may be put in approved landfill. Deposit of liquid in landfill is strictly regulated (40 CFR 65.314).

SPECIAL PROTECTION AND PROCEDURES

RESPIRATORY PROTECTION: Not needed in normal use. A cartridge respirator for oil mist may be used where misting is a problem.

VENTILATION: Local or mechanical ventilation sufficient to control mist below TLV level. Check for possible ignition sources.

PROTECTIVE EQUIPMENT: Not needed in normal use. Barrier creams, oil-impervious gloves and sleeves or other protective gear, including eye shield, may be used to reduce chances of contact.

SPECIAL PRECAUTIONS

HANDLING AND STORING: Avoid extremes of temperature in storage. Store away from sources of ignition. Avoid contamination. Do not store in unlabeled containers.

WORKPLACE: Practice good housekeeping. Clean up spills promptly to avoid slippery footing. Have needed protective equipment and fire extinguisher available. Check operations for possible ignition sources.

DISPOSAL: Used oil must be disposed of in an environmentally acceptable manner. See WASTE DISPOSAL. Do not put oil into sewer system or use as road oil or for other use which may result in uncontrolled release.

PERSONAL: Good personal hygiene is most important. Keep clean. Do not continue to wear oil-soaked leather goods. Wash before eating. Use emollient cream to counter dry skin if needed.

LABELING AND SHIPPING

HAZARD CLASS: None

PROPER SHIPPING NAME: Lubricating Oil (Motor); Petroleum Lubricating Oil (Rail)

PLACARD: None

LABEL: None

STCC NO.: 2911415

IDENTIFICATION NO.: None

OTHER REGULATORY REQUIREMENTS

Any environmental release which introduces oil into public waterways (sufficient to produce an oil sheen) must be reported promptly to the National Response Center, U.S. Coast Guard, Washington, D.C. (1-800-424-8802) (FWPCA §311(b)(3)).

REVISION DATE: 11/17/81

REPLACING DATE OF: Undated OSHA-20

PRODUCT CODES: P 9353, P 3381, P 9346, P 9347,
P 3384, P 9348, P 9349, P 3417

REVIEWED BY: PJF/WMD/BCP/RAR/CWS/WJW/SMD

APPROVED: 

TITLE: Product Safety Coordinator

MATERIAL SAFETY DATA SHEET

ENERGOL CS-150-H

ORIGINAL
(Red)**MARKETED BY:**

THE STANDARD OIL COMPANY (OHIO)
BORON OIL COMPANY
BP OIL INC.
Midland Building
Cleveland, Ohio 44115

CORPORATE EMERGENCY TELEPHONE (Toll-Free)

FROM WITHIN OHIO: 800-362-8059
FROM OUTSIDE OHIO: 800-321-8642
CHEMTREC (CMA): 800-424-9300

DESCRIPTION

CHEMICAL NAME: Petroleum Oil
SYNONYMS: Paper machine circulating oil
CHEMICAL FAMILY: Hydrocarbons
COMPOSITION: Solvent refined paraffinic base oil blend plus alkyl zinc dithiophosphate antioxidant, corrosion inhibitor, and a lubricant preservative additive. The blended oil contains not more than 0.10% barium and 0.10% zinc.

CAS REGISTRY NO.: Mixture

FORMULA: Refined petroleum oil plus additives

STATEMENT OF HEALTH HAZARD

HAZARD DESCRIPTION: No acute effects from incidental contact with new oil. Skin dryness, irritation, dermatitis from excessive prolonged or repeated contacts. Danger of serious pneumonitis from aspiration into lungs if swallowed.

EXPOSURE LIMITS: Oil mist: 5 mg/m³ TLV (8 hour time weighted average exposure; OSHA 29 CFR 1910.1000 Table Z-1). Avoid unnecessary exposure to liquid oil.

EMERGENCY TREATMENT

EFFECTS OF OVEREXPOSURE: Excessive prolonged or repeated contact may dry skin, cause irritation, dermatitis, lesions. Allergic reaction may occur with a few individuals. Swallowing liquid oil may cause discomfort but no lasting effects. Liquid oil aspirated into lungs may cause dangerous chemical pneumonitis with increasing difficulty in breathing. This effect may be delayed.

EMERGENCY AID: Eyes: wash with copious water for 15 minutes. Eyelids should be held apart and away from eyeball to ensure thorough rinsing. Skin: wash thoroughly with soap and water. Change all contaminated clothing; shower at earliest convenience. Swallowing: DO NOT INDUCE VOMITING BECAUSE OF DANGER OF ASPIRATING OIL INTO LUNGS. After spontaneous vomiting, monitor for breathing difficulty. Refer to physician. IF SYMPTOMS PERSIST OR EXPOSURE IS SEVERE, SEEK PROMPT MEDICAL HELP.

NOTE TO PHYSICIAN: Petroleum aspiration may cause severe pneumonitis ('oil pneumonia'). Vomiting should not be induced, and gastric lavage should be undertaken with consideration of endotracheal intubation, especially with an unconscious patient.

PHYSICAL DATA

BOILING PT.: (Initial) 700°F
VAPOR PRESSURE: @ 100°F: Negligible
SPECIFIC GRAVITY: @ 60°F: 0.881
PERCENT VOLATILE: @ 100°F: 0%
APPEARANCE AND ODOR: Light orange, clear and bright liquid with moderate petroleum odor.

POUR PT.: 5°F

VAPOR DENSITY (Air=1): Heavier than air

SOLUBILITY IN WATER: Negligible

EVAPORATION RATE (Water=1): Very slow

FIRE AND EXPLOSION HAZARD DATA

FLASH POINT: (ASTM D-92) 450°F

AUTOIGNITION TEMP.: Not known

FLAMMABLE LIMITS IN AIR: Not known

EXTINGUISHING MEDIA: Carbon dioxide, foam, dry chemicals, sand or earth, water fog.

SPECIAL FIRE-FIGHTING PROCEDURES: Avoid breathing fumes, wear adequate respiratory protection. Do not spray water directly into fire to avoid foaming or spread of floating oil.

Use water to cool threatened containers. Product is a Class IIIB Combustible Liquid (OSHA 29 CFR 1910.106). Fires involving product are Class B fires (OSHA 29 CFR 1910.156).

UNUSUAL FIRE AND EXPLOSION HAZARDS: None

CHEMICAL REACTIVITY

STABILITY: Stable under normal conditions. Not chemically reactive.
CONDITIONS TO AVOID: Contact with strong oxidizers (peroxides, chlorine, oxygen under pressure, strong oxidizing acids), extreme heat or sources of ignition.
HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide, carbon dioxide, traces of sulfur oxides from combustion. Reactive volatile hydrocarbons, traces of hydrogen sulfide from thermal decomposition.

SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN: Eliminate all sources of ignition. Contain spill. Recover liquid by mopping, vacuum, or absorbent. Avoid unnecessary contact with liquid by use of oil-impervious gloves, boots, or other protective clothing as needed.
WASTE DISPOSAL: Deposit recovered oil in waste oil system, incinerate under approved conditions, or transfer oil to approved re-refiner. Contaminated absorbent and diking solids may be put in approved landfill. Deposit of liquid in landfill is strictly regulated (40 CFR 165.314).

SPECIAL PROTECTION AND PROCEDURES

RESPIRATORY PROTECTION: Not needed in normal use. A cartridge respirator for oil mist may be used where misting is a problem.
VENTILATION: Local or mechanical ventilation sufficient to control mist below TLV level. Check for possible ignition sources.
PROTECTIVE EQUIPMENT: Not needed in normal use. Barrier creams, oil-impervious gloves and sleeves or other protective gear, including eye shield, may be used to reduce chances of contact.

SPECIAL PRECAUTIONS

HANDLING AND STORING: Avoid extremes of temperature in storage. Store away from sources of ignition. Avoid contamination. Do not store in unlabeled containers.
WORKPLACE: Practice good housekeeping. Clean up spills promptly to avoid slippery footing. Have needed protective equipment and fire extinguisher available. Check operations for possible ignition sources.
DISPOSAL: Used oil must be disposed of in an environmentally acceptable manner. See WASTE DISPOSAL. Do not put oil into sewer system or use as road oil or for other use which may result in uncontrolled release.
PERSONAL: Good personal hygiene is most important. Keep clean. Do not continue to wear oil-soaked leather goods. Wash before eating. Use emollient cream to counter dry skin if needed.

LABELING AND SHIPPING

HAZARD CLASS: None
PROPER SHIPPING NAME: Lubricating Oil (Motor); Petroleum Lubricating Oil (Rail)
PLACARD: None
STCC NO.: 2911415
LABEL: None
IDENTIFICATION NO.: None

OTHER REGULATORY REQUIREMENTS

Any environmental release which introduces oil into public waterways (sufficient to produce an oil sheen) must be reported promptly to the National Response Center, U.S. Coast Guard, Washington, D.C. (1-800-424-8802) (FWPCA §311(b)(3)).

REVISION DATE: 11/20/81
REPLACING DATE OF: New Issue
PRODUCT CODES: P 3318

REVIEWED BY: PJP/WDM/ECP/RAR/WJW/SMD
APPROVED: 
TITLE: Product Safety Coordinator

MARKETED BY:

THE STANDARD OIL COMPANY (OHIO)
BORON OIL COMPANY
BP OIL INC.
Midland Building
Cleveland, Ohio 44115

CORPORATE EMERGENCY TELEPHONE (Toll-Free)
FROM WITHIN OHIO: 800-362-8059
FROM OUTSIDE OHIO: 800-321-8642
CHEMTREC (CMA): 800-424-9300

DESCRIPTION

CHEMICAL NAME: Petroleum Oil

CAS REGISTRY NO.: Mixture

SYNONYMS: Marine diesel engine oil

CHEMICAL FAMILY: Hydrocarbon

FORMULA: Refined petroleum oil plus additives

COMPOSITION: Solvent refined paraffinic base oil blend plus alkyl zinc dithiophosphate, calcium sulfonate, and sulfurized alkyl calcium phenate with calcium carbonate and amine detergent/dispersant package. The blended oil contains not more than 0.1% zinc, 0.1% phosphorus, 0.4% calcium and 1.5% sulfated ash.

STATEMENT OF HEALTH HAZARD

HAZARD DESCRIPTION: No acute effects from incidental contact with new oil. Skin dryness, irritation, dermatitis from excessive prolonged or repeated contacts. Danger of serious pneumonitis from aspiration into lungs if swallowed.

EXPOSURE LIMITS: Oil mist: 5 mg/m³ TLV (8 hour time weighted average exposure; OSHA 29 CFR 1910.1000 Table Z-1). Avoid unnecessary exposure to liquid oil.

EMERGENCY TREATMENT

EFFECTS OF OVEREXPOSURE: Excessive prolonged or repeated contact may dry skin, cause irritation, dermatitis, lesions. Allergic reaction may occur with a few individuals. Swallowing liquid oil may cause discomfort but no lasting effects. Liquid oil aspirated into lungs may cause dangerous chemical pneumonitis with increasing difficulty in breathing. This effect may be delayed.

EMERGENCY AID: Eyes: wash with copious water for 15 minutes. Eyelids should be held apart and away from eyeball to ensure thorough rinsing. Skin: wash thoroughly with soap and water. Change all contaminated clothing; shower at earliest convenience. Swallowing: DO

INDUCE VOMITING BECAUSE OF DANGER OF ASPIRATING OIL INTO LUNGS. After spontaneous vomiting, monitor for breathing difficulty. Refer to physician. IF SYMPTOMS PERSIST OR EXPOSURE IS SEVERE, SEEK PROMPT MEDICAL HELP.

NOTE TO PHYSICIAN: Petroleum aspiration may cause severe pneumonitis ('oil pneumonia'). Vomiting should not be induced, and gastric lavage should be undertaken with consideration of endotracheal intubation, especially with an unconscious patient.

PHYSICAL DATA

BOILING PT.: (Initial) 700°F

POUR PT.: -5°F

VAPOR PRESSURE: @ 100°F: negligible

VAPOR DENSITY (Air=1): Heavier than air

SPECIFIC GRAVITY: @ 60°F: 0.887

SOLUBILITY IN WATER: Negligible

PERCENT VOLATILE: @ 100°F: 0%

EVAPORATION RATE (Water=1): Very slow

APPEARANCE AND ODOR: Dark, clear and bright liquid with petroleum odor.

FIRE AND EXPLOSION HAZARD DATA

FLASH POINT: (ASTM D-92) 480°F

AUTOIGNITION TEMP.: Not known

FLAMMABLE LIMITS IN AIR: Not known

EXTINGUISHING MEDIA: Carbon dioxide, foam, dry chemicals, sand or earth, water fog.

SPECIAL FIRE-FIGHTING PROCEDURES: Avoid breathing fumes, wear adequate respiratory protection. Do not spray water directly into fire to avoid foaming or spread of floating oil. Use water to cool threatened containers. Product is a Class IIIB Combustible Liquid (OSHA 29 CFR 1910.106). Fires involving product are Class B fires (OSHA 29 CFR 1910.156).

UNUSUAL FIRE AND EXPLOSION HAZARDS: None

CHEMICAL REACTIVITY

STABILITY: Stable under normal conditions. Not chemically reactive.

CONDITIONS TO AVOID: Contact with strong oxidizers (peroxides, chlorine, oxygen under pressure, strong oxidizing acids), extreme heat or sources of ignition.

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide, carbon dioxide from combustion. Reactive volatile hydrocarbons from thermal decomposition.

SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN: Eliminate all sources of ignition. Contain spill. Recover liquid by mopping, vacuum, or absorbent. Avoid unnecessary contact with liquid by use of oil-impervious gloves, boots, or other protective clothing as needed.

WASTE DISPOSAL: Deposit recovered oil in waste oil system, incinerate under approved conditions, or transfer oil to approved re-refiner. Contaminated absorbent and diking solids may be put in approved landfill. Deposit of liquid in landfill is strictly regulated (40 CFR 265.314).

SPECIAL PROTECTION AND PROCEDURES

RESPIRATORY PROTECTION: Not needed in normal use. A cartridge respirator for oil mist may be used where misting is a problem.

VENTILATION: Local or mechanical ventilation sufficient to control mist below TLV level. Check for possible ignition sources.

PROTECTIVE EQUIPMENT: Not needed in normal use. Barrier creams, oil-impervious gloves and sleeves or other protective gear, including eye shield, may be used to reduce chances of contact.

SPECIAL PRECAUTIONS

HANDLING AND STORING: Avoid extremes of temperature in storage. Store away from sources of ignition. Avoid contamination. Do not store in unlabeled containers.

WORKPLACE: Practice good housekeeping. Clean up spills promptly to avoid slippery footing. Have needed protective equipment and fire extinguisher available. Check operations for possible ignition sources.

DISPOSAL: Used oil must be disposed of in an environmentally acceptable manner. See WASTE DISPOSAL. Do not put oil into sewer system or use as road oil or for other use which may result in uncontrolled release.

PERSONAL: Good personal hygiene is most important. Keep clean. Do not continue to wear oil-soaked leather goods. Wash before eating. Use emollient cream to counter dry skin if needed.

LABELING AND SHIPPING

HAZARD CLASS: None

PROPER SHIPPING NAME: Lubricating Oil (Motor); Petroleum Lubricating Oil (Rail)

PLACARD: None

LABEL: None

STCC NO.: 2911415

IDENTIFICATION NO.: None

OTHER REGULATORY REQUIREMENTS


Any environmental release which introduces oil into public waterways (sufficient to produce an oil sheen) must be reported promptly to the National Response Center, U.S. Coast Guard, Washington, D.C. (1-800-424-8802) (FWPCA §311(b)(3)).

REVISION DATE: 11/20/81

REPLACING DATE OF: New Issue

PRODUCT CODES: P 3248

REVIEWED BY: PJF/WDM/EGP/RAR/WJW/SMD

APPROVED: 

TITLE: Product Safety Coordinator

ALTERNATIVE TO OSHA-20 FORM

MATERIAL SAFETY DATA SHEET

ELDORAN 4

ORIGINAL

(REQ)

MARKETED BY:

THE STANDARD OIL COMPANY
BORON OIL COMPANY
BP OIL INC.
Midland Building
Cleveland, Ohio 44115

CORPORATE EMERGENCY TELEPHONE (Toll-Free)
FROM WITHIN OHIO: 800-362-8059
FROM OUTSIDE OHIO: 800-321-8642
CHEMTREC (CMA): 800-424-9300

DESCRIPTION

CHEMICAL NAME: Petroleum Oil CAS REGISTRY NO.: Mixture
SYNONYMS: Parting compound, mold release compound
CHEMICAL FAMILY: Hydrocarbon FORMULA: Refined petroleum oil plus additives
COMPOSITION: Hydrogen-treated naphthenic coastal base oil plus 20% Mineral Spirits and 2.5% Oleic Acid.

STATEMENT OF HEALTH HAZARD

HAZARD DESCRIPTION: No acute effects from incidental contact with new oil. Skin dryness, irritation, dermatitis from excessive prolonged or repeated contacts. Danger of serious pneumonitis from aspiration into lungs if swallowed.

EXPOSURE LIMITS: Oil mist: 5 mg/m³ TLV (8-hour time-weighted average exposure; OSHA 29 CFR 1910.1000 Table Z-1). Avoid unnecessary exposure to mist or liquid oil.

EMERGENCY TREATMENT

EFFECTS OF OVEREXPOSURE: Excessive prolonged or repeated contact may dry skin, cause irritation, dermatitis, lesions. Allergic reaction may occur with a few individuals. Swallowing liquid oil may cause discomfort but no lasting effects. Liquid oil aspirated into lungs may cause dangerous chemical pneumonitis with increasing difficulty in breathing. This effect may be delayed.

EMERGENCY AID: Eyes: wash with copious water for 15 minutes. Eyelids should be held apart and away from eyeball to ensure thorough rinsing. Skin: wash thoroughly with soap and water. Change all contaminated clothing; shower at earliest convenience. Swallowing: DO NOT INDUCE VOMITING BECAUSE OF DANGER OF ASPIRATING OIL INTO LUNGS. After spontaneous vomiting, monitor for breathing difficulty. IF SYMPTOMS PERSIST OR EXPOSURE IS SEVERE, SEEK PROMPT MEDICAL HELP.

NOTE TO PHYSICIAN: Petroleum aspiration may cause severe pneumonitis ('oil pneumonia'). Vomiting should not be induced, and gastric lavage should be undertaken with consideration of endotracheal intubation, especially with an unconscious patient.

PHYSICAL DATA

BOILING PT.: (Initial) 570°F POUR PT.: -20°F
VAPOR PRESSURE: @ 68°F: 2 mm Hg VAPOR DENSITY (Air=1): Heavier than air
SPECIFIC GRAVITY: @ 60°F: 0.882 SOLUBILITY IN WATER: Negligible
PERCENT VOLATILE: @ 100°F: 0% EVAPORATION RATE (Water=1): Very slow

APPEARANCE AND ODOR: Clear light colored liquid with hydrocarbon odor.

FIRE AND EXPLOSION HAZARD DATA

FLASH POINT: (ASTM D-92) 175°F AUTOIGNITION TEMP.: Not known

FLAMMABLE LIMITS IN AIR: Not known

EXTINGUISHING MEDIA: Carbon dioxide, foam, dry chemicals, sand or earth, water fog.

SPECIAL FIRE-FIGHTING PROCEDURES: Avoid breathing fumes, wear adequate respiratory protection. Do not spray water directly into fire to avoid foaming or spread of floating oil. Use water to cool threatened containers. Product is a Class IIIA Combustible Liquid (OSHA 29 CFR 1910.106). Fires involving product are Class B fires (OSHA 29 CFR 1910.156).

UNUSUAL FIRE AND EXPLOSION HAZARDS: None

ORIGINAL
(Red)

CHEMICAL REACTIVITY

STABILITY: Stable under normal conditions. Not chemically reactive.

CONDITIONS TO AVOID: Contact with strong oxidizers (peroxides, chlorine, oxygen under pressure, strong oxidizing acids), extreme heat or sources of ignition.

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide, carbon dioxide from combustion. Reactive volatile hydrocarbons from thermal decomposition.

SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN: Eliminate all sources of ignition. Contain spill. Recover liquid by mopping, vacuum, or absorbent. Avoid unnecessary contact with liquid by use of oil-impervious gloves, boots, or other protective clothing as needed.

WASTE DISPOSAL: Deposit recovered oil in waste oil system, incinerate under approved conditions, or transfer oil to approved re-refiner. Contaminated absorbent and diking solids may be put in approved landfill. Deposit of liquid in landfill is strictly regulated (40 CFR 265.314).

SPECIAL PROTECTION AND PROCEDURES

RESPIRATORY PROTECTION: Not needed in normal use. A cartridge respirator for oil mist may be used where misting is a problem. Where oil is applied to mold as a fog spray use of respirator is recommended.

VENTILATION: Local or mechanical ventilation sufficient to control mist below TLV level. Check for possible ignition sources.

PROTECTIVE EQUIPMENT: Not needed in normal use. Barrier creams, oil-impervious gloves and sleeves or other protective gear, including eye shield, may be used to reduce chances of contact.

SPECIAL PRECAUTIONS

HANDLING AND STORING: Avoid extremes of temperature in storage. Store away from sources of ignition. Avoid contamination. Do not store in unlabeled containers.

WORKPLACE: Practice good housekeeping. Clean up spills promptly to avoid slippery footing. Have needed protective equipment and fire extinguisher available. Check operations for possible ignition sources.

DISPOSAL: Used oil must be disposed of in an environmentally acceptable manner. See WASTE DISPOSAL. Do not put oil into sewer system or use as road oil or for other use which may result in uncontrolled release.

PERSONAL: Good personal hygiene is most important. Keep clean. Do not continue to wear oil-soaked leather goods. Wash before eating. Use emollient cream to counter dry skin if needed.

LABELING AND SHIPPING

HAZARD CLASS: None

PROPER SHIPPING NAME: Lubricating Oil (Motor); Petroleum Lubricating Oil (Rail)

PLACARD: None

STCC NO.: 2911415

LABEL: None

IDENTIFICATION NO.: None

OTHER REGULATORY REQUIREMENTS

Any environmental release which introduces oil into public waterways (sufficient to produce an oil sheen) must be reported promptly to the National Response Center, U.S. Coast Guard, Washington, D.C. (1-800-424-8802) (FWPCA §311(b)(3)).

REVISION DATE: 11/20/81
REPLACING DATE OF: New Issue
PRODUCT CODES: P 3279

REVIEWED BY: PJF/WDM/ECP/RAR/WJW/SMD
APPROVED: 
TITLE: Product Safety Coordinator

ALTERNATIVE TO OSHA-20 FORM

MARKETED BY:

THE STANDARD OIL COMPANY (OHIO)
BORON OIL COMPANY
BP OIL INC.
Midland Building
Cleveland, Ohio 44115

CORPORATE EMERGENCY TELEPHONE (Toll-Free)

FROM WITHIN OHIO: 800-362-8059
FROM OUTSIDE OHIO: 800-321-8642
CHEMTREC (CMA): 800-424-9300

DESCRIPTION

CHEMICAL NAME: Petroleum Oil CAS REGISTRY NO.: Mixture
SYNONYMS: Cylinder oil for marine engines burning heavy fuel
CHEMICAL FAMILY: Hydrocarbons FORMULA: Refined petroleum oil plus additives
COMPOSITION: Solvent refined paraffinic base oil and naphthenic coastal base oil blend plus calcium phenate, calcium sulfonate, and succinimide ashless dispersant. The blended oil contains not more than 3.0% calcium.

STATEMENT OF HEALTH HAZARD

HAZARD DESCRIPTION: No acute effects from incidental contact with new oil. Skin dryness, irritation, dermatitis from excessive prolonged or repeated contacts. Danger of serious pneumonitis from aspiration into lungs if swallowed.

EXPOSURE LIMITS: Oil mist: 5 mg/m³ TLV (8 hour time weighted average exposure; OSHA 29 CFR 1910.1000 Table Z-1). Avoid unnecessary exposure to liquid oil.

EMERGENCY TREATMENT

EFFECTS OF OVEREXPOSURE: Excessive prolonged or repeated contact may dry skin, cause irritation, dermatitis, lesions. Allergic reaction may occur with a few individuals. Swallowing liquid oil may cause discomfort but no lasting effects. Liquid oil aspirated into lungs may cause dangerous chemical pneumonitis with increasing difficulty in breathing. This effect may be delayed.

EMERGENCY AID: Eyes: wash with copious water for 15 minutes. Eyelids should be held apart and away from eyeball to ensure thorough rinsing. Skin: wash thoroughly with soap and water. Change all contaminated clothing; shower at earliest convenience. Swallowing: DO NOT INDUCE VOMITING BECAUSE OF DANGER OF ASPIRATING OIL INTO LUNGS. After spontaneous vomiting, monitor for breathing difficulty. Refer to physician. IF SYMPTOMS PERSIST OR EXPOSURE IS SEVERE, SEEK PROMPT MEDICAL HELP.

NOTE TO PHYSICIAN: Petroleum aspiration may cause severe pneumonitis ('oil pneumonia'). Vomiting should not be induced, and gastric lavage should be undertaken with consideration of endotracheal intubation, especially with an unconscious patient.

PHYSICAL DATA

BOILING PT.: (Initial) 700°F POUR PT.: +5°F
VAPOR PRESSURE: @ 100°F: less than 0.1 mm Hg VAPOR DENSITY (Air=1): Heavier than air
SPECIFIC GRAVITY: @ 60°F: 0.940 SOLUBILITY IN WATER: Negligible
PERCENT VOLATILE: @ 100°F: 0% EVAPORATION RATE (Water=1): Very slow
APPEARANCE AND ODOR: Pale yellow to dark orange liquid with "petroleum oil" odor.

FIRE AND EXPLOSION HAZARD DATA

FLASH POINT: (ASTM D-92) 450°F AUTOIGNITION TEMP.: Not known

FLAMMABLE LIMITS IN AIR: Not known

EXTINGUISHING MEDIA: Carbon dioxide, foam, dry chemicals, sand or earth, water fog.

SPECIAL FIRE-FIGHTING PROCEDURES: Avoid breathing fumes, wear adequate respiratory protection. Do not spray water directly into fire to avoid foaming or spread of floating oil.

Use water to cool threatened containers. Product is a Class IIIB Combustible Liquid (OSHA 29 CFR 1910.106). Fires involving product are Class B fires (OSHA 29 CFR 1910.156).

UNUSUAL FIRE AND EXPLOSION HAZARDS: None

CHEMICAL REACTIVITY

STABILITY: Stable under normal conditions. Not chemically reactive.

CONDITIONS TO AVOID: Contact with strong oxidizers (peroxides, chlorine, oxygen under pressure, strong oxidizing acids), extreme heat or sources of ignition.

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide, carbon dioxide from combustion. Reactive volatile hydrocarbons from thermal decomposition.

SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN: Eliminate all sources of ignition. Contain spill. Recover liquid by mopping, vacuum, or absorbent. Avoid unnecessary contact with liquid by use of oil-impervious gloves, boots, or other protective clothing as needed.

WASTE DISPOSAL: Deposit recovered oil in waste oil system, incinerate under approved conditions, or transfer oil to approved re-refiner. Contaminated absorbent and diking solids may be put in approved landfill. Deposit of liquid in landfill is strictly regulated (40 CFR 65.314).

SPECIAL PROTECTION AND PROCEDURES

RESPIRATORY PROTECTION: Not needed in normal use. A cartridge respirator for oil mist may be used where misting is a problem.

VENTILATION: Local or mechanical ventilation sufficient to control mist below TLV level. Check for possible ignition sources.

PROTECTIVE EQUIPMENT: Not needed in normal use. Barrier creams, oil-impervious gloves and sleeves or other protective gear, including eye shield, may be used to reduce chances of contact.

SPECIAL PRECAUTIONS

HANDLING AND STORING: Avoid extremes of temperature in storage. Store away from sources of ignition. Avoid contamination. Do not store in unlabeled containers.

WORKPLACE: Practice good housekeeping. Clean up spills promptly to avoid slippery footing. Have needed protective equipment and fire extinguisher available. Check operations for possible ignition sources.

DISPOSAL: Used oil must be disposed of in an environmentally acceptable manner. See WASTE DISPOSAL. Do not put oil into sewer system or use as road oil or for other use which may result in uncontrolled release.

PERSONAL: Good personal hygiene is most important. Keep clean. Do not continue to wear oil-soaked leather goods. Wash before eating. Use emollient cream to counter dry skin if needed.

LABELING AND SHIPPING

HAZARD CLASS: None

PROPER SHIPPING NAME: Lubricating Oil (Motor); Petroleum Lubricating Oil (Rail)

PLACARD: None

LABEL: None

STCC NO.: 2911415

IDENTIFICATION NO.: None

OTHER REGULATORY REQUIREMENTS

Any environmental release which introduces oil into public waterways (sufficient to produce an oil sheen) must be reported promptly to the National Response Center, U.S. Coast Guard, Washington, D.C. (1-800-424-8802) (FWPCA §311(b)(3)).

REVISION DATE: 11/6/81

REPLACING DATE OF: Undated OSHA-20

PRODUCT CODES: P 3242

REVIEWED BY: PJF/WDM/ECP/RAR/CWS/WJW/SMD

APPROVED: *[Signature]*

TITLE: Product Safety Coordinator

MATERIAL SAFETY DATA SHEET

ENERGOL GR-XP 220

ORIGINAL
(Red)

MARKETED BY:

THE STANDARD OIL COMPANY (OHIO)
BORON OIL COMPANY
BP OIL INC.
Midland Building
Cleveland, Ohio 44115

CORPORATE EMERGENCY TELEPHONE (Toll-Free)

FROM WITHIN OHIO: 800-362-8059
FROM OUTSIDE OHIO: 800-321-8642
CHEMTREC (OMA) 800-424-9300

DESCRIPTION

CHEMICAL NAME: Non-Leaded Extreme Pressure Gear Lubricant CAS REGISTRY NO.: Mixture
SYNONYMS: Gear lubricant
CHEMICAL FAMILY: Petroleum Hydrocarbons FORMULA: Refined petroleum oil plus additives
COMPOSITION: Solvent refined paraffinic base oil blend plus a sulfur-phosphorus multi-purpose additive, a polyisobutylene viscosity index improver and a methacrylate copolymer pour depressant. The blended oil contains not more than 3.0% sulfur and 0.2% phosphorus.

STATEMENT OF HEALTH HAZARD

HAZARD DESCRIPTION: No acute effects from incidental contact with new oil. Skin dryness, irritation, dermatitis from excessive prolonged or repeated contacts. Danger of serious pneumonitis from aspiration into lungs if swallowed.
EXPOSURE LIMITS: Oil mist: 5 mg/M³ PEL (8-hour time-weighted average exposure; OSHA 29 CFR 1910.1000, Table Z-1). Avoid unnecessary exposure to liquid oil.

EMERGENCY TREATMENT

EFFECTS OF OVEREXPOSURE: Excessive prolonged or repeated contact may dry skin, cause irritation, dermatitis, lesions. Swallowing liquid oil may cause discomfort but no lasting effects. Liquid oil aspirated into lungs may cause dangerous chemical pneumonitis with increasing difficulty in breathing. This effect may be delayed.
EMERGENCY AID: Eyes: wash with copious water for 15 minutes. Eyelids should be held apart and away from eyeball to ensure thorough rinsing. Skin: wash thoroughly with soap and water. Change all contaminated clothing; shower at earliest convenience. Swallowing: DO NOT INDUCE VOMITING BECAUSE OF DANGER OF ASPIRATING OIL INTO LUNGS. After spontaneous vomiting, monitor for breathing difficulty. Refer to physician. IF SYMPTOMS PERSIST OR EXPOSURE IS SEVERE, SEEK PROMPT MEDICAL HELP.
NOTE TO PHYSICIAN: Petroleum aspiration may cause severe pneumonitis ('oil pneumonia'). Vomiting should not be induced, and gastric lavage should be undertaken with consideration of endotracheal intubation, especially with an unconscious patient.

PHYSICAL DATA

BOILING PT.: (Initial Range) 680°-780°F
VAPOR PRESSURE: @ 100°F: less than 0.1 mm Hg
SPECIFIC GRAVITY: @ 60°F: 0.8789 - 0.8899
PERCENT VOLATILE: @ 100°F: 0%
APPEARANCE AND ODOR: Dark green liquid with "petroleum oil" odor.
POUR PT.: above 0°F
VAPOR DENSITY (Air=1): Heavier than air
SOLUBILITY IN WATER: Negligible
EVAPORATION RATE (Water=1): Very slow

FIRE AND EXPLOSION HAZARD DATA

FLASH POINT: (ASTM D-92) 410°F or above
FLAMMABLE LIMITS IN AIR: Not known
EXTINGUISHING MEDIA: Carbon dioxide, foam, dry chemicals, sand or earth, water fog.
SPECIAL FIRE-FIGHTING PROCEDURES: Avoid breathing fumes, wear adequate respiratory protection. Do not spray water directly into fire to avoid foaming or spread of floating oil. Use water to cool threatened containers. Product is a Class IIIB Combustible Liquid (OSHA 29 CFR 1910.106). Fires involving product are Class B fires (OSHA 29 CFR 1910.156).
UNUSUAL FIRE AND EXPLOSION HAZARDS: None
AUTOIGNITION TEMP.: Not known

CHEMICAL REACTIVITY

STABILITY: Stable under normal conditions. Not chemically reactive.

CONDITIONS TO AVOID: Contact with strong oxidizers (peroxides, chlorine, oxygen under pressure, strong oxidizing acids), extreme heat or sources of ignition.

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide, carbon dioxide and trace sulfur dioxide from combustion. Reactive volatile hydrocarbons and trace hydrogen sulfide from thermal decomposition.

SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN: Eliminate all sources of ignition. Contain spill. Recover liquid by mopping, vacuum, or absorbent. Avoid unnecessary contact with liquid by use of oil-impervious gloves, boots, or other protective clothing as needed.

WASTE DISPOSAL: Deposit recovered oil in waste oil system, incinerate under approved conditions, or transfer oil to approved re-refiner. Contaminated absorbent and diking solids may be put in approved landfill. Deposit of liquid in landfill is strictly regulated.

SPECIAL PROTECTION AND PROCEDURES

RESPIRATORY PROTECTION: Not needed in normal use. A cartridge respirator for oil mist may be used where misting is a problem.

VENTILATION: Local or mechanical ventilation sufficient to control mist below TLV level. Check for possible ignition sources.

PROTECTIVE EQUIPMENT: Not needed in normal use. Barrier creams, oil-impervious gloves and sleeves or other protective gear, including eye shield, may be used to reduce chances of contact.

SPECIAL PRECAUTIONS

HANDLING AND STORING: Avoid extremes of temperature in storage. Store away from sources of ignition. Avoid contamination. Do not store in unlabeled containers.

WORKPLACE: Practice good housekeeping. Clean up spills promptly to avoid slippery footing. Have needed protective equipment and fire extinguisher available. Check operations for possible ignition sources.

DISPOSAL: Used oil must be disposed of in an environmentally acceptable manner. See WASTE DISPOSAL. Do not put oil into sewer system or use as road oil or for other use which may result in uncontrolled release.

PERSONAL: Good personal hygiene is most important. Keep clean. Do not continue to wear oil-soaked leather goods. Wash before eating. Use emollient cream to counter dry skin if needed.

LABELING AND SHIPPING

HAZARD CLASS: None

PROPER SHIPPING NAME: Lubricating Oil (Motor); Petroleum Lubricating Oil (Rail)

PLACARD: None

LABEL: None

STCC NO.: 2911415

IDENTIFICATION NO.: None

OTHER REGULATORY REQUIREMENTS

Any environmental release which introduces oil into public waterways (sufficient to produce an oil sheen) must be reported promptly to the National Response Center, U.S. Coast Guard, Washington, D.C. (1-800-424-8802) (FWPCA §311(b)(3)).

REVISION DATE: 8/21/84

REPLACING DATE OF: 10/77 OSHA-20

PRODUCT CODES: P 3368

REVIEWED BY: KEB/HNF/KLG/GRK/RWM/RLP/RAR/CWS

APPROVED:

TITLE: Product Safety Coordinator

ALTERNATIVE TO OSHA-20 FORM

05550

MATERIAL SAFETY DATA SHEET

ENERGOL GR-XP 150

ORIGINAL
(Red)

MARKETED BY:

THE STANDARD OIL COMPANY (OHIO)
BORON OIL COMPANY
BP OIL INC.
Midland Building
Cleveland, Ohio 44115

CORPORATE EMERGENCY TELEPHONE (Toll-free)

FROM WITHIN OHIO: 800-362-8059
FROM OUTSIDE OHIO: 800-321-8642
CHEMTREC (CMA) 800-424-9300

DESCRIPTION

CHEMICAL NAME: Non-Leaded Extreme Pressure Gear Lubricant

CAS REGISTRY NO.: Mixture

SYNONYMS: Gear lubricant

CHEMICAL FAMILY: Petroleum Hydrocarbons

FORMULA: Refined petroleum oil plus additives

COMPOSITION: Solvent refined paraffinic base oil blend plus a sulfur-phosphorus multi-purpose additive, a polyisobutylene viscosity index improver and a methacrylate copolymer pour depressant. The blended oil contains not more than 3.0% sulfur and 0.2% phosphorus.

STATEMENT OF HEALTH HAZARD

HAZARD DESCRIPTION: No acute effects from incidental contact with new oil. Skin dryness, irritation, dermatitis from excessive prolonged or repeated contacts. Danger of serious pneumonitis from aspiration into lungs if swallowed.

EXPOSURE LIMITS: Oil mist: 5 mg/M³ PEL (8-hour time-weighted average exposure; OSHA 29 CFR 1910.1000, Table Z-1). Avoid unnecessary exposure to liquid oil.

EMERGENCY TREATMENT

EFFECTS OF OVEREXPOSURE: Excessive prolonged or repeated contact may dry skin, cause irritation, dermatitis, lesions. Swallowing liquid oil may cause discomfort but no lasting effects. Liquid oil aspirated into lungs may cause dangerous chemical pneumonitis with increasing difficulty in breathing. This effect may be delayed.

EMERGENCY AID: Eyes: wash with copious water for 15 minutes. Eyelids should be held apart and away from eyeball to ensure thorough rinsing. Skin: wash thoroughly with soap and water. Change all contaminated clothing; shower at earliest convenience. Swallowing: DO NOT INDUCE VOMITING BECAUSE OF DANGER OF ASPIRATING OIL INTO LUNGS. After spontaneous vomiting, monitor for breathing difficulty. Refer to physician. IF SYMPTOMS PERSIST OR EXPOSURE IS SEVERE, SEEK PROMPT MEDICAL HELP.

NOTE TO PHYSICIAN: Petroleum aspiration may cause severe pneumonitis ('oil pneumonia'). Vomiting should not be induced, and gastric lavage should be undertaken with consideration of endotracheal intubation, especially with an unconscious patient.

PHYSICAL DATA

BOILING PT.: (Initial Range) 680°-780°F

POUR PT.: above -5°F

VAPOR PRESSURE: @ 100°F: less than 0.1 mm Hg

VAPOR DENSITY (Air=1): Heavier than air

SPECIFIC GRAVITY: @ 60°F: 0.8762 - 0.8871

SOLUBILITY IN WATER: Negligible

PERCENT VOLATILE: @ 100°F: 0%

EVAPORATION RATE (Water=1): Very slow

APPEARANCE AND ODOR: Dark green liquid with "petroleum oil" odor.

FIRE AND EXPLOSION HAZARD DATA

FLASH POINT: (ASTM D-92) 400°F or above

AUTOIGNITION TEMP.: Not known

FLAMMABLE LIMITS IN AIR: Not known

EXTINGUISHING MEDIA: Carbon dioxide, foam, dry chemicals, sand or earth, water fog.

SPECIAL FIRE-FIGHTING PROCEDURES: Avoid breathing fumes, wear adequate respiratory protection. Do not spray water directly into fire to avoid foaming or spread of floating oil. Use water to cool threatened containers. Product is a Class IIIB Combustible Liquid (OSHA 29 CFR 1910.106). Fires involving product are Class B fires (OSHA 29 CFR 1910.156).

UNUSUAL FIRE AND EXPLOSION HAZARDS: None

CHEMICAL REACTIVITY

STABILITY: Stable under normal conditions. Not chemically reactive.

CONDITIONS TO AVOID: Contact with strong oxidizers (peroxides, chlorine, oxygen under pressure, strong oxidizing acids), extreme heat or sources of ignition.

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide, carbon dioxide and trace sulfur dioxide from combustion. Reactive volatile hydrocarbons and trace hydrogen sulfide from thermal decomposition.

SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN: Eliminate all sources of ignition. Contain spill. Recover liquid by mopping, vacuum, or absorbent. Avoid unnecessary contact with liquid by use of oil-impervious gloves, boots, or other protective clothing as needed.

WASTE DISPOSAL: Deposit recovered oil in waste oil system, incinerate under approved conditions, or transfer oil to approved re-refiner. Contaminated absorbent and diking solids may be put in approved landfill. Deposit of liquid in landfill is strictly regulated.

SPECIAL PROTECTION AND PROCEDURES

RESPIRATORY PROTECTION: Not needed in normal use. A cartridge respirator for oil mist may be used where misting is a problem.

VENTILATION: Local or mechanical ventilation sufficient to control mist below TLV level. Check for possible ignition sources.

PROTECTIVE EQUIPMENT: Not needed in normal use. Barrier creams, oil-impervious gloves and sleeves or other protective gear, including eye shield, may be used to reduce chances of contact.

SPECIAL PRECAUTIONS

HANDLING AND STORING: Avoid extremes of temperature in storage. Store away from sources of ignition. Avoid contamination. Do not store in unlabeled containers.

WORKPLACE: Practice good housekeeping. Clean up spills promptly to avoid slippery footing. Have needed protective equipment and fire extinguisher available. Check operations for possible ignition sources.

DISPOSAL: Used oil must be disposed of in an environmentally acceptable manner. See WASTE DISPOSAL. Do not put oil into sewer system or use as road oil or for other use which may result in uncontrolled release.

PERSONAL: Good personal hygiene is most important. Keep clean. Do not continue to wear oil-soaked leather goods. Wash before eating. Use emollient cream to counter dry skin if needed.

LABELING AND SHIPPING

HAZARD CLASS: None

PROPER SHIPPING NAME: Lubricating Oil (Motor); Petroleum Lubricating Oil (Rail)

PLACARD: None

STCC NO.: 2911415

LABEL: None

IDENTIFICATION NO.: None

OTHER REGULATORY REQUIREMENTS

Any environmental release which introduces oil into public waterways (sufficient to produce an oil sheen) must be reported promptly to the National Response Center, U.S. Coast Guard, Washington, D.C. (1-800-424-8802) (FWPCA §311(b)(3)).

REVISION DATE: 8/21/84

REPLACING DATE OF: 10/77 OSHA-20

PRODUCT CODES: P 3367

ALTERNATIVE TO OSHA-20 FORM

05560

REVIEWED BY: KEB/HNF/KLG/GRK/RWM/RLP/RAR/CWS

APPROVED:

TITLE: Product Safety Coordinator

ORIGINAL
(Red)

SUN MDS

MATERIAL SAFETY DATA SHEET

PAGE 1

Sun Refining and
Marketing Company

THIS PRODUCT SAFETY INFORMATION IS PROVIDED PERIODICALLY TO ASSIST OUR CUSTOMERS IN ASSESSING COMPLIANCE WITH HEALTH/SAFETY/ENVIRONMENTAL REGULATIONS. PLEASE FORWARD THIS TO YOUR MANAGER OF SAFETY AND HEALTH. THIS IS THE FIRST FORM PRINTED FOR YOU FOR THIS PRODUCT

SUN CODE

R0000013890

PRINTED: 85/12/07
SECTION 1 IDENTIFICATION

NAME SUNQUENCH 1021	SYNONYMS QUEVCHING OIL	REV. DATE 11/12/85
CAS REGISTRY NO.	CAS NAME NO CLASSIFICATION-MIXTURE	

UNIVERSAL CONTAINER
STEEL DRUM CORPORATION
2ND & PRICE STREET
TRAINER PA 19013

CHEMICAL FAMILY
BLEND
SUN REFINING
AND MARKETING COMPANY
TEN PENN CENTER 1801 MARKET STREET
PHILADELPHIA PA 19103

INFORMATION SUPPLIED BY
AND PHONE
JONATHAN M. HAAS
(215) 293-6321

SECTION 2 INGREDIENTS
MATERIAL(S)

SOLVENT REFINED LIGHT PARAFFINIC DISTILLATE, CAS#64741-89-5; AND SOLVENT DEWAXED RESIDUAL OIL, CAS#64741-95-3. SOME BLENDS MAY ALSO CONTAIN SOLVENT REFINED HEAVY PARAFFINIC DISTILLATE, CAS#64741-88-4. THE VISCOSITY OF THE FINISHED PRODUCT RANGES FROM 85 TO 95 SUS @ 100F.

SECTION 3 PHYSICAL DATA

BOILING POINT: 760 mm Hg WIDE RANGE °F. WIDE RANGE °CMELTING POINT: N/A °F. N/A °CSPECIFIC GRAVITY: (H₂O=1) 0.85PACKING DENSITY: Kg/m³ N/A
(WHEN APPLICABLE)VAPOR PRESSURE: (mm Hg AT 20°C) 40.038
VAPOR DENSITY: (AIR = 1) 8+SOLUBILITY IN H₂O: (% BY VOL.) NIL% VOLATILES BY VOL.: NILEVAPORATION RATE:
(ETHYL ETHER = 1) 1000X SLOWERpH INFORMATION: pH N/A @ _____ g/l H₂OCTANOL/WATER
PARTITION COEFFICIENT: N.D.APPEARANCE AMBER FLUID.
AND ODOR: LITTLE ODDOR.
ODOR THRESHOLD (ppm) N.D.

SECTION 4 FIRE AND EXPLOSION DATA (CONT. ON PAGE 2)

FLASH POINT: 345 MINIMUM CDC °F. 174 MIN CDC °C. AUTOIGNITION TEMPERATURE: 650 ESTIMATED °F. 343.3 ESTIMATED °C.

NFPA CLASSIFICATION			HAZARD RATING			FLAMMABLE LIMITS IN AIR	
HEALTH <u>0</u>	FIRE <u>1</u>	REACTIVITY <u>0</u>	LEAST <u>0</u>	SLIGHT <u>1</u>		LOWER EXPLOSIVE LEVEL (LEL) <u>NOT DETERMINED</u>	% VC
SPECIFIC HAZARD			MODERATE <u>2</u>	HIGH <u>3</u>	EXTREME <u>4</u>	UPPER EXPLOSIVE LEVEL (UEL) <u>NOT DETERMINED</u>	% VC

FIRE AND EXPLOSION HAZARDS

CAN BE MADE TO BURN (FLASH POINT GREATER THAN 200F).

SUN CODE

R0000013890

ORIGINAL
(Red)

MATERIAL SAFETY DATA SHEET

PAGE 2

SUN CODE

0000013890

EXTINGUISHING MEDIA

WATER FOG. CHEMICAL FOAM. DRY CHEMICAL POWDER.
CARBON DIOXIDE.

SPECIAL FIRE FIGHTING INSTRUCTIONS

WEAR SELF-CONTAINED BREATHING APPARATUS WHEN FIRE
FIGHTING IN CONFINED SPACE.

SECTION 5 HEALTH HAZARD INFORMATION

EXPOSURE LIMITS

9 HR. TIME WEIGHTED PERMISSIBLE EXPOSURE 5.0 MG/M3 . GOVERNMENT REGULATION.

ROUTES OF EXPOSURE AND EFFECTS

INHALATION NO EFFECTS EXPECTED.

SKIN PRACTICALLY NON-TOXIC IF ABSORBED (LD50 GREATER THAN 2000 MG/KG). MILD IRRITATION WITH PROLONGED OR
REPEATED CONTACT.

EYE CONTACT WITH THE EYE MAY CAUSE TEMPORARY SMARTING. NO PERMANENT DAMAGE EXPECTED.

INGESTION HARMFUL OR FATAL IF SWALLOWED. PULMONARY ASPIRATION HAZARD IF SWALLOWED AND VOMITING OCCURS.

FIRST AID

INHALATION NONE NORMALLY REQUIRED.

SKIN WASH WITH SOAP AND WATER UNTIL NO ODOR REMAINS.

EYE FLUSH WITH WATER. IF IRRITATION PERSISTS, OBTAIN MEDICAL ASSISTANCE.

INGESTION DO NOT INDUCE VOMITING! DO NOT GIVE LIQUIDS! OBTAIN MEDICAL ASSISTANCE. SMALL AMOUNTS WHICH
ACCIDENTALLY ENTER MOUTH SHOULD BE RINSED OUT UNTIL TASTE OF IT IS GONE.

SECTION 6 REACTIVITY DATA (CONT. ON PAGE 3)

STABILITY

STABLE.

INCOMPATIBLE MATERIALS

STRONG OXIDIZERS.

HAZARDOUS DECOMPOSITION PRODUCTS

CARBON MONOXIDE AND ASPHYXIANTS

MATERIAL SAFETY DATA SHEET

GE 3

SUN CODE

000000138900

POLYMERIZATION

POLYMERIZATION WILL NOT OCCUR.

SECTION 7 PROTECTION INFORMATION

VENTILATION

VENTILATE AS NEEDED TO COMPLY WITH EXPOSURE LIMIT.

PERSONAL PROTECTIVE EQUIPMENT

PRODUCT MINIMALLY IRRITATING TO EYES. LOCAL SAFETY POLICY DECISION.

GLOVES IMPERVIOUS GLOVES RECOMMENDED WHEN PROLONGED SKIN CONTACT CANNOT BE AVOIDED.

RESPIRATOR CONCENTRATION-IN-AIR DETERMINES PROTECTION NEEDED. USE ONLY NIOSH CERTIFIED RESPIRATORY PROTECTION. RESPIRATORY PROTECTION USUALLY NOT NEEDED UNLESS PRODUCT IS HEATED OR MISTED.

OTHER NONE NORMALLY NEEDED.

SECTION 8 DISPOSAL PROCEDURES

AQUATIC TOXICITY

NOT DETERMINED

SPILL, LEAK OR RELEASE

CONTAIN SPILL. ABSORB ON INERT MATERIAL.

WASTE DISPOSAL

FOLLOW FEDERAL, STATE AND LOCAL REGULATIONS. DO NOT FLUSH TO DRAIN/ STORM SEWER. CONTRACT TO AUTHORIZED DISPOSAL SERVICE.

SECTION 9 SPECIAL PRECAUTIONS

STORAGE AND HANDLING CONDITIONS

FPA CLASS IIIB STORAGE.

SECTION 10 PRECAUTIONARY LABEL (IF APPLICABLE)

NO ADDITIONAL PRECAUTIONS AND LABELS



Sun Refining and
Marketing Company

MATERIAL SAFETY DATA SHEET

PAGE 1

THIS PRODUCT SAFETY INFORMATION IS PROVIDED PERIODICALLY TO ASSIST OUR CUSTOMERS IN ASSESSING COMPLIANCE WITH HEALTH/SAFETY/ENVIRONMENTAL REGULATIONS. PLEASE FORWARD THIS TO YOUR MANAGER OF SAFETY AND HEALTH. THIS IS THE FIRST FORM PRINTED FOR YOU FOR THIS PRODUCT

SUN CODE

R00000371401

PRINTED: 85/12/07

SECTION 1 IDENTIFICATION

NAME **SUNFLEET DEXRON II** SYNONYMS
CAS REGISTRY NO. CAS NAME **NO CLASSIFICATION - MIXTURE**

REV. DATE
12/02/85

UNIVERSAL CONTAINER
STEEL DRUM CORPORATION
2ND & PRICE STREET
TRAINER PA 19013

CHEMICAL FAMILY **BLEND**
SUN REFINING
AND MARKETING COMPANY
TEN PENN CENTER 1801 MARKET STREET
PHILADELPHIA PA 19103
INFORMATION SUPPLIED BY
AND PHONE **RAMONA PANSON
(215) 293-6323**

SECTION 2 INGREDIENTS

MATERIAL(S)
SEVERELY SOLVENT REFINED LIGHT PARAFFINIC DISTILLATE CAS# 64741-89-5; SEVERELY SOLVENT REFINED HEAVY PARAFFINIC DISTILLATE CAS# 64741-88-4; CHEMICALLY NEUTRALIZED, SEVERELY HYDROTREATED, HEAVY NAPHTHENIC DISTILLATE (PETROLEUM) CAS# 64742-52-5. ORGANIC-METALLO COMPOUNDS; RED DYE. PRODUCT TYPICALLY CONTAINS 0.21% SULFUR; 0.034% PHOSPHORUS.

SECTION 3 PHYSICAL DATA

BOILING POINT: 760 mm Hg HIGH °F. 415.4 °C	VAPOR PRESSURE: (mm Hg AT 20°C) NIL	pH INFORMATION: pH 6.4 @ _____ g/l H ₂
MELTING POINT: N/A °F. N/A °C	VAPOR DENSITY: (AIR = 1) 1.34	OCTANOL/WATER PARTITION COEFFICIENT: N.O.
SPECIFIC GRAVITY: (H ₂ O=1) 0.88	SOLUBILITY IN H ₂ O: (% BY VOL.) NIL	APPEARANCE RED FLUID.
PACKING DENSITY: (WHEN APPLICABLE) Kg/m ³ N/A	% VOLATILES BY VOL.: NIL	AND ODOR: SLIGHT ODOR.
	EVAPORATION RATE: (ETHYL ETHER = 1) 1000X SLOWER	ODOR THRESHOLD (ppm) N.O.

SECTION 4 FIRE AND EXPLOSION DATA (CONT. ON PAGE 2)

FLASH POINT: **350 MINIMUM COC** °F. **177 MINIMUM COC** °C. AUTOIGNITION TEMPERATURE: **695 ESTIMATED** °F. **368 ESTIMATED** °C.

NFPA CLASSIFICATION

HEALTH **0** FIRE **1** REACTIVITY **0**

SPECIFIC HAZARD

HAZARD RATING

LEAST	SLIGHT	
0	1	
MODERATE	HIGH	EXTREME
2	3	4

FLAMMABLE LIMITS IN AIR

LOWER EXPLOSIVE LEVEL (LEL) **NOT DETERMINED** % VOL

UPPER EXPLOSIVE LEVEL (UEL) **NOT DETERMINED** % VOL

FIRE AND EXPLOSION HAZARDS

CAN BE MADE TO BURN (FLASH POINT GREATER THAN 200°F).

SUN CODE

R00000371401

EXTINGUISHING MEDIA

WATER FOG. CHEMICAL FOAM. DRY CHEMICAL POWDER.
CARBON DIOXIDE.

SPECIAL FIRE FIGHTING INSTRUCTIONS

WEAR SELF-CONTAINED BREATHING APPARATUS WHEN FIRE
FIGHTING IN CONFINED SPACE.

00000371401

SECTION 5 HEALTH HAZARD INFORMATION

EXPOSURE LIMITS

8-HR. TIME WEIGHTED PERMISSIBLE EXPOSURE 5.0 MG/M³. SUN RECOMMENDATION.

ROUTES OF EXPOSURE AND EFFECTS

INHALATION NO ACUTE EFFECTS EXPECTED TO TWICE EXPOSURE LIMIT.

KIN PRACTICALLY NON-TOXIC IF ABSORBED (LD50 GREATER THAN 2000 MG/KG). MINIMAL IRRITATION WITH PROLONGED OR
REPEATED CONTACT.

EYE CONTACT WITH THE EYE MAY CAUSE MINIMAL IRRITATION.

GESTION PRACTICALLY NON-TOXIC (LD50 > 15G/KG). ESTIMATED LD50 IN RATS IS: >15 GRAMS PER KILOGRAM OF
AT BDD

FIRST AID

INHALATION MOVE PERSON TO FRESH AIR.

EYES WASH WITH SOAP AND WATER UNTIL NO ODOR REMAINS. WASH CLOTHING BEFORE REUSE.

E FLUSH WITH WATER. IF IRRITATION PERSISTS, OBTAIN MEDICAL ASSISTANCE.

GESTION GIVE LIQUIDS AND INDUCE VOMITING UNLESS VICTIM IS UNCONSCIOUS. OBTAIN MEDICAL ASSISTANCE. SMALL
AMOUNTS WHICH ACCIDENTALLY ENTER MOUTH SHOULD BE RINSED OUT UNTIL TASTE OF IT IS GONE.

SECTION 6 REACTIVITY DATA (CONT. ON PAGE 3)

STABILITY

TABLE.

INCOMPATIBLE MATERIALS

STRONG OXIDIZERS

HAZARDOUS DECOMPOSITION PRODUCTS

CARBON MONOXIDE AND ASPHYXIANTS.

R00000371401

POLYMERIZATION

POLYMERIZATION WILL NOT OCCUR.

SECTION 7 PROTECTION INFORMATION

VENTILATION

VENTILATE AS NEEDED TO COMPLY WITH EXPOSURE LIMIT.

PERSONAL PROTECTIVE EQUIPMENT

PRODUCT MINIMALLY IRRITATING TO EYES. LOCAL SAFETY POLICY DECISION.

GLOVES IMPERVIOUS GLOVES RECOMMENDED WHEN PROLONGED SKIN CONTACT CANNOT BE AVOIDED.

RESPIRATOR CONCENTRATION-IN-AIR DETERMINES PROTECTION NEEDED. USE ONLY NIOSH CERTIFIED RESPIRATORY PROTECTION. RESPIRATORY PROTECTION USUALLY NOT NEEDED UNLESS PRODUCT IS HEATED OR MISTED.

OTHER IF CONTACT IS UNAVOIDABLE, WEAR IMPERVIOUS PROTECTIVE GEAR. LAUNDRY SOILED CLOTHES.

SECTION 8 DISPOSAL PROCEDURES

AQUATIC TOXICITY

NOT DETERMINED

SPILL, LEAK OR RELEASE

CONTAIN SPILL. ABSORB ON INERT MATERIAL.

WASTE DISPOSAL

FOLLOW FEDERAL, STATE AND LOCAL REGULATIONS. DO NOT FLUSH TO DRAIN/ STORM SEWER. CONTRACT TO AUTHORIZED DISPOSAL SERVICE.

SECTION 9 SPECIAL PRECAUTIONS

STORAGE AND HANDLING CONDITIONS

IF EPA CLASS IIIB STORAGE. AVOID PROLONGED BREATHING OF MIST OR VAPOR. AVOID PROLONGED OR REPEATED CONTACT WITH SKIN. WASH THOROUGHLY AFTER HANDLING.

SECTION 10 PRECAUTIONARY LABEL (IF APPLICABLE)

NO ADDITIONAL PRECAUTIONS AND LABELS

MATERIAL SAFETY DATA SHEET

PAGE 1

Sun Refining and
Marketing Company

THIS PRODUCT SAFETY INFORMATION IS PROVIDED
PERIODICALLY TO ASSIST OUR CUSTOMERS IN ASSESSING
COMPLIANCE WITH HEALTH/SAFETY/ENVIRONMENTAL
REGULATIONS. PLEASE FORWARD THIS TO YOUR MANAGER
OF SAFETY AND HEALTH. THIS IS THE FIRST FORM
PRINTED FOR YOU FOR THIS PRODUCT

SUN CODE

PRINTED: 85/12/07

R00000481424

SECTION 1 IDENTIFICATION

AME

SUNFLEET ATF TYPE F

SYNONYMS

REV. DATE

12/02/85

CAS REGISTRY NO.

N/A

CAS NAME

NO CLASSIFICATION - MIXTURE

UNIVERSAL CONTAINER
STEEL DRUM CORPORATION
2ND & PRICE STREET
TRAINER PA 19013

CHEMICAL FAMILY

BLEND

SUN REFINING
AND MARKETING COMPANY
TEN PENN CENTER 1801 MARKET STREET
PHILADELPHIA PA 19103

INFORMATION SUPPLIED BY
AND PHONE

RAMONA PANSON
(215) 293-6323

SECTION 2 INGREDIENTS

MATERIAL(S)

EVERELY SOLVENT REFINED HEAVY PARAFFINIC DISTILLATE (PETROLEUM) CAS# 64741-88-4; SUBSTITUTED SUCCINIC
ACID DERIVATIVES; DITHIOPHOSPHORIC ACID DERIVATIVES; RED DYE; TRACE DEFOAMER. PRODUCT TYPICALLY CONTAINS
SULFUR 0.16%, ZINC 0.05% AND PHOSPHORUS 0.04%.

SECTION 3 PHYSICAL DATA

OILING POINT: 760 mm Hg WIDE RANGE °F. WIDE RANGE °CVAPOR PRESSURE: (mm Hg AT 20°C) 0.0001
VAPOR DENSITY: (AIR = 1) 8+pH INFORMATION: pH N/A @ _____ g/l H₂OMELTING POINT: N/A °F. N/A °CSOLUBILITY IN H₂O: (% BY VOL.) NIL

OCTANOL/WATER

PARTITION COEFFICIENT: N.D.SPECIFIC GRAVITY: (H₂O = 1) 0.87% VOLATILES BY VOL.: NILAPPEARANCE RED FLUIDPACKING DENSITY: (WHEN APPLICABLE) Kg/m³ N/AEVAPORATION RATE:
(ETHYL ETHER = 1) 1000X SLOWERAND ODOR: CHARACTERISTIC ODORODOR THRESHOLD (ppm) N.D.

SECTION 4 FIRE AND EXPLOSION DATA (CONT. ON PAGE 2)

FLASH POINT: 350 CDC MINIMUM °F. 177 MINIMUM CDC °CAUTOIGNITION TEMPERATURE: 675 ESTIMATED °F. 357 ESTIMATED °C

NFPA CLASSIFICATION

HEALTH 0 FIRE 1 REACTIVITY 1

HAZARD RATING

LEAST 0 SLIGHT 1

MODERATE 2 HIGH 3 EXTREME 4

FLAMMABLE LIMITS IN AIR

LOWER EXPLOSIVE LEVEL (LEL) NOT DETERMINED % VOL.UPPER EXPLOSIVE LEVEL (UEL) NOT DETERMINED % VOL.

FIRE AND EXPLOSION HAZARDS

CAN BE MADE TO BURN (FLASH POINT GREATER THAN 200°F).

SUN CODE

R00000481424

K00000481424

EXTINGUISHING MEDIA

WATER FOG. CHEMICAL FOAM. DRY CHEMICAL POWDER. CARBON DIOXIDE.

SPECIAL FIRE FIGHTING INSTRUCTIONS

WEAR SELF-CONTAINED BREATHING APPARATUS WHEN FIRE FIGHTING IN CONFINED SPACE.

SECTION 5 HEALTH HAZARD INFORMATION

EXPOSURE LIMITS

4R. TIME WEIGHTED PERMISSIBLE EXPOSURE 5.0 MG/M3 . SUN RECOMMENDATION.

ROUTES OF EXPOSURE AND EFFECTS

INHALATION NO ACUTE EFFECTS EXPECTED TO TWICE EXPOSURE LIMIT.

IN PRACTICALLY NON-TOXIC IF ABSORBED (LD50 GREATER THAN 2000 MG/KG). MILD IRRITATION WITH PROLONGED OR REPEATED CONTACT.

IF CONTACT WITH THE EYE MAY CAUSE MILD IRRITATION.

INGESTION PRACTICALLY NON-TOXIC (LD50 > 15G/KG).

FIRST AID

INHALATION MOVE PERSON TO FRESH AIR.

IF IN WASH WITH SOAP AND WATER UNTIL NO ODOR REMAINS. WASH CLOTHING BEFORE REUSE.

IF FLUSH WITH WATER. IF IRRITATION PERSISTS, OBTAIN MEDICAL ASSISTANCE.

INGESTION GIVE LIQUIDS AND INDUCE VOMITING UNLESS VICTIM IS UNCONSCIOUS. OBTAIN MEDICAL ASSISTANCE. SMALL AMOUNTS WHICH ACCIDENTALLY ENTER MOUTH SHOULD BE RINSED OUT UNTIL TASTE OF IT IS GONE.

SECTION 6 REACTIVITY DATA (CONT. ON PAGE 3)

STABILITY

TABLE.

INCOMPATIBLE MATERIALS

STRONG OXIDIZERS.

HAZARDOUS DECOMPOSITION PRODUCTS

CARBON MONOXIDE AND ASPHYXIANTS

R00000481424

POLYMERIZATION

POLYMERIZATION WILL NOT OCCUR.

SECTION 7 PROTECTION INFORMATION

VENTILATION

VENTILATE AS NEEDED TO COMPLY WITH EXPOSURE LIMIT.

PERSONAL PROTECTIVE EQUIPMENT

WEAR EYE SPLASH PROOF CHEMICAL GOGGLES RECOMMENDED TO PROTECT AGAINST SPLASH OF PRODUCT.

WEAR IMPERVIOUS GLOVES RECOMMENDED WHEN PROLONGED SKIN CONTACT CANNOT BE AVOIDED.

RESPIRATOR CONCENTRATION-IN-AIR DETERMINES PROTECTION NEEDED. USE ONLY NIOSH CERTIFIED RESPIRATORY PROTECTION. RESPIRATORY PROTECTION USUALLY NOT NEEDED UNLESS PRODUCT IS HEATED OR MISTED.

OTHER IF CONTACT IS UNAVOIDABLE, WEAR IMPERVIOUS PROTECTIVE GEAR. LAUNDRY SOILED CLOTHES.

SECTION 8 DISPOSAL PROCEDURES

AQUATIC TOXICITY

NOT DETERMINED

SPILL, LEAK OR RELEASE

CONTAIN SPILL. ABSORB ON INERT MATERIAL.

WASTE DISPOSAL

FOLLOW FEDERAL, STATE AND LOCAL REGULATIONS. DO NOT FLUSH TO DRAIN/ STORM SEWER. CONTRACT TO AUTHORIZED DISPOSAL SERVICE.

SECTION 9 SPECIAL PRECAUTIONS

STORAGE AND HANDLING CONDITIONS

HFP CLASS IIIB STORAGE. AVOID PROLONGED BREATHING OF MIST OR VAPOR. AVOID PROLONGED OR REPEATED CONTACT WITH SKIN. WASH THOROUGHLY AFTER HANDLING.

SECTION 10 PRECAUTIONARY LABEL (IF APPLICABLE)

NO ADDITIONAL PRECAUTIONS AND LABELS

MATERIAL SAFETY DATA SHEET

PAGE 1



Sun Refining and
Marketing Company

THIS PRODUCT SAFETY INFORMATION IS PROVIDED PERIODICALLY TO ASSIST OUR CUSTOMERS IN ASSESSING COMPLIANCE WITH HEALTH/SAFETY/ENVIRONMENTAL REGULATIONS. PLEASE FORWARD THIS TO YOUR MANAGER OF SAFETY AND HEALTH. THIS IS THE FIRST FORM PRINTED FOR YOU FOR THIS PRODUCT

SUN CODE

R00000371200

PRINTED: 85/12/07
SECTION 1 IDENTIFICATION

NAME **SUN REFRIGERATION 303** SYNONYMS

REV. DATE
03/02/82

S REGISTRY NO. CAS NAME **NO CLASSIFICATION - MIXTURE**

UNIVERSAL CONTAINER
STEEL DRUM CORPORATION
2ND & PRICE STREET
TRAINER PA 19013

CHEMICAL FAMILY
BLENDED PETROLEUM LUBRICANT.
SUN REFINING
AND MARKETING COMPANY
TEN PENN CENTER 1801 MARKET STREET
PHILADELPHIA PA 19103
INFORMATION SUPPLIED BY
AND PHONE **RAMONA PANSON**
(215) 293-6323

SECTION 2 INGREDIENTS

MATERIAL(S)
REFINED PARAFFINIC OILS PLUS PJJR DEPRESSANT AND DEFOAMER ADDITIVES

SECTION 3 PHYSICAL DATA

OILING POINT: 760 mm Hg **HIGH WITH** °F. **WIDE RANGE** °C

VAPOR PRESSURE: (mm Hg AT 20°C) **NIL**
VAPOR DENSITY: (AIR = 1) **1.0**

pH INFORMATION: pH **N/A** @ _____ g/l H₂O

MELTING POINT: **N/A** °F. _____ °C

SOLUBILITY IN H₂O: (% BY VOL.) **NIL**

OCTANOL/WATER
PARTITION COEFFICIENT: **N.D.**

SPECIFIC GRAVITY: (H₂O = 1) **0.88**

% VOLATILES BY VOL.: **NIL**

APPEARANCE **LIGHT AMBER FLUID.**

PACKING DENSITY: (WHEN APPLICABLE) Kg/m³ **N/A**

EVAPORATION RATE: (ETHYL ETHER = 1) **1000X SLOWER**

AND ODOR: **LITTLE ODOR.**
ODOR THRESHOLD (ppm) **N.D.**

SECTION 4 FIRE AND EXPLOSION DATA (CONT. ON PAGE 2)

FLASH POINT: **625 MINIMUM COC** °F. **218 MINIMUM COC** °C. AUTOIGNITION TEMPERATURE: **700 ESTIMATED** °F. **371 ESTIMATED** °C.

NFPA CLASSIFICATION			HAZARD RATING			FLAMMABLE LIMITS IN AIR	
HEALTH	<u>0</u>	FIRE	<u>1</u>	REACTIVITY	<u>3</u>	LOWER EXPLOSIVE LEVEL (LEL)	<u>NOT DETERMINED</u> % VOL.
SPECIFIC HAZARD						UPPER EXPLOSIVE LEVEL (UEL)	<u>NOT DETERMINED</u> % VOL.

SECTION 5 FIRE AND EXPLOSION HAZARDS

CAN BE MADE TO BURN (FLASH POINT GREATER THAN 200°F).

SUN CODE
R00000371200

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EXTINGUISHING MEDIA

WATER FOG. CHEMICAL FOAM. DRY CHEMICAL POWDER.
CARBON DIOXIDE.

SPECIAL FIRE FIGHTING INSTRUCTIONS

WEAR SELF-CONTAINED BREATHING APPARATUS WHEN FIRE
FIGHTING IN CONFINED SPACE.

SECTION 5 HEALTH HAZARD INFORMATION

EXPOSURE LIMITS

HR. TIME WEIGHTED PERMISSIBLE EXPOSURE 5.0 MG/M3 . SUN RECOMMENDATION.

ROUTES OF EXPOSURE AND EFFECTS

INHALATION NO ACUTE EFFECTS EXPECTED TO TWICE EXPOSURE LIMIT.

SKIN PRACTICALLY NON-TOXIC IF ABSORBED (LD50 GREATER THAN 2000 MG/KG). NO SKIN EFFECTS EXPECTED.

EYE CONTACT WITH THE EYE MAY CAUSE TEMPORARY SMARTING. NO PERMANENT DAMAGE EXPECTED.

INGESTION PRACTICALLY NON-TOXIC (LD50 > 15G/KG). LD50 IN RATS IS: 30 GRAMS PER KILOGRAM OF RAT BODY
WEIGHT.

FIRST AID

INHALATION NONE NORMALLY REQUIRED.

SKIN WASH WITH SOAP AND WATER UNTIL NO ODOR REMAINS.

EYE FLUSH WITH WATER.

INGESTION GIVE LIQUIDS AND INDUCE VOMITING UNLESS VICTIM IS UNCONSCIOUS. OBTAIN MEDICAL ASSISTANCE.

SECTION 6 REACTIVITY DATA (CONT. ON PAGE 3)

STABILITY	INCOMPATIBLE MATERIALS	HAZARDOUS DECOMPOSITION PRODUCTS
STABLE.	STRONG OXIDIZERS.	CARBON MONOXIDE AND ASPHYXIANTS

R00000371200

POLYMERIZATION

POLYMERIZATION WILL NOT OCCUR.

SECTION 7 PROTECTION INFORMATION

VENTILATION

ONE NORMALLY NEEDED.

PERSONAL PROTECTIVE EQUIPMENT

EYE PRODUCT MINIMALLY IRRITATING TO EYES. LOCAL SAFETY POLICY DECISION.

SKIN PRODUCT MINIMALLY IRRITATING TO SKIN. LOCAL SAFETY POLICY DECISION.

RESPIRATOR RESPIRATORY PROTECTION USUALLY NOT NEEDED UNLESS PRODUCT IS HEATED OR MISTED.

OTHER NONE NORMALLY NEEDED.

SECTION 8 DISPOSAL PROCEDURES

AQUATIC TOXICITY

NOT DETERMINED

SPILL, LEAK OR RELEASE

ABSORB ON INERT MATERIAL.

WASTE DISPOSAL

FOLLOW FEDERAL, STATE AND LOCAL REGULATIONS.

SECTION 9 SPECIAL PRECAUTIONS

STORAGE AND HANDLING CONDITIONS

FPA CLASS IIIB STORAGE.

SECTION 10 PRECAUTIONARY LABEL (IF APPLICABLE)

NO ADDITIONAL PRECAUTIONS AND LABELS

ORIGINAL
(Red)

MATERIAL SAFETY DATA SHEET

PAGE 1

Sun Refining and
Marketing Company

THIS PRODUCT SAFETY INFORMATION IS PROVIDED PERIODICALLY TO ASSIST OUR CUSTOMERS IN ASSESSING COMPLIANCE WITH HEALTH/SAFETY/ENVIRONMENTAL REGULATIONS. PLEASE FORWARD THIS TO YOUR MANAGER OF SAFETY AND HEALTH. THIS IS THE FIRST FORM PRINTED FOR YOU FOR THIS PRODUCT

SUN CODE

R0000004230

PRINTED: 85/12/07

SECTION 1 IDENTIFICATION

NAME SUNPAR LW 107	SYNONYMS PETROLEUM OIL	REV. DATE 10/22/85
CAS REGISTRY NO. 64741-89-5	CAS NAME SOLVENT REFINED LIGHT PARAFFINIC DISTILLATE	
UNIVERSAL CONTAINER STEEL DRUM CORPORATION 2ND & PRICE STREET TRAINER PA 19013		CHEMICAL FAMILY PETROLEUM HYDROCARBON SUN REFINING AND MARKETING COMPANY TEN PENN CENTER 1801 MARKET STREET PHILADELPHIA PA 19103 INFORMATION SUPPLIED BY AND PHONE RAMONA D. PANSON (215) 293-6323

SECTION 2 INGREDIENTS

MATERIAL(S)

SEVERELY SOLVENT REFINED, HYDROTREATED LIGHT PARAFFINIC DISTILLATE 100% IS A COMPLEX COMBINATION OF HYDROCARBONS OBTAINED AS THE RAFFINATE FROM A SOLVENT EXTRACTION PROCESS. IT CONSISTS PREDOMINATELY OF SATURATED HYDROCARBONS HAVING CARBON NUMBERS PREDOMINANTLY IN THE RANGE OF C15 THRU C30 AND PRODUCES A FINISHED OIL OF APPROXIMATELY 55 TO 75 SUS AT 100F.

SECTION 3 PHYSICAL DATA

BOILING POINT: 760 mm Hg WIDE RANGE °F. WIDE RANGE °C	VAPOR PRESSURE: (mm Hg AT 20°C) < 0.04	pH INFORMATION: pH N/A @ _____ g/l H.
MELTING POINT: N/A °F. N/A °C	VAPOR DENSITY: (AIR = 1) > 5+	OCTANOL/WATER PARTITION COEFFICIENT: N.D.
SPECIFIC GRAVITY: (H ₂ O = 1) 0.85	SOLUBILITY IN H ₂ O: (% BY VOL.) NIL	APPEARANCE PALE FLUID
PACKING DENSITY: (WHEN APPLICABLE) Kg/m ³ N/A	% VOLATILES BY VOL.: NIL	AND ODOR: NO ODOR
	EVAPORATION RATE: (ETHYL ETHER = 1) 1000X SLOWER	ODOR THRESHOLD (ppm) N.D.

SECTION 4 FIRE AND EXPLOSION DATA (CONT. ON PAGE 2)

FLASH POINT: 340 MINIMUM CDC °F. 171 MINIMUM CDC °C.	AUTOIGNITION TEMPERATURE: 596 ESTIMATED °F. 313 ESTIMATED °C.	
NFPA CLASSIFICATION	HAZARD RATING	FLAMMABLE LIMITS IN AIR
HEALTH 0 FIRE 1 REACTIVITY 3	LEAST 0 SLIGHT 1	LOWER EXPLOSIVE LEVEL (LEL) NOT DETERMINED % V
SPECIFIC HAZARD	MODERATE 2 HIGH 3 EXTREME 4	UPPER EXPLOSIVE LEVEL (UEL) NOT DETERMINED % V

FIRE AND EXPLOSION HAZARDS

CAN BE MADE TO BURN (FLASH POINT GREATER THAN 200F).

SUN CODE

R0000004230

ORIGINAL
(Red)

MATERIAL SAFETY DATA SHEET

PAGE 2

SUN CODE

00000062301

EXTINGUISHING MEDIA

WATER FOG. CHEMICAL FOAM. DRY CHEMICAL POWDER.
CARBON DIOXIDE.

SPECIAL FIRE FIGHTING INSTRUCTIONS

WEAR SELF-CONTAINED BREATHING APPARATUS WHEN FIRE
FIGHTING IN CONFINED SPACE.

SECTION 5 HEALTH HAZARD INFORMATION

EXPOSURE LIMITS

4R. TIME WEIGHTED PERMISSIBLE EXPOSURE 5.0 MG/M3 . GOVERNMENT REGULATION.

ROUTES OF EXPOSURE AND EFFECTS

INHALATION NO ACUTE EFFECTS EXPECTED TO TWICE EXPOSURE LIMIT.

PRACTICALLY NON-TOXIC IF ABSORBED (LD50 GREATER THAN 2000 MG/KG). MILD IRRITATION WITH PROLONGED OR
REPEATED CONTACT. ESTIMATED ORAL SKIN IRRITATION SCORE IS: 0.6 OUT OF 8.0 ESTIMATED DERMAL LD50 IN
RABBITS IS: > 5,000 MG/KG

NO EYE EFFECT EXPECTED.

GESTION HARMFUL OR FATAL IF SWALLOWED. PULMONARY ASPIRATION HAZARD IF SWALLOWED AND VOMITING OCCURS.
ESTIMATED LD50 IN RATS IS: > 30 GRAMS PER KILOGRAM OF RAT BODY

FIRST AID

INHALATION NONE NORMALLY REQUIRED.

IN WASH WITH SOAP AND WATER UNTIL NO ODOR REMAINS. WASH CLOTHING BEFORE REUSE.

E FLUSH WITH WATER. IF IRRITATION PERSISTS, OBTAIN MEDICAL ASSISTANCE.

GESTION DO NOT INDUCE VOMITING! DO NOT GIVE LIQUIDS! OBTAIN MEDICAL ASSISTANCE. SMALL AMOUNTS WHICH
ACCIDENTALLY ENTER MOUTH SHOULD BE RINSED OUT UNTIL TASTE OF IT IS GONE.

SECTION 6 REACTIVITY DATA (CONT. ON PAGE 3)

STABILITY

TABLE.

INCOMPATIBLE MATERIALS

STRONG OXIDIZERS

HAZARDOUS DECOMPOSITION PRODUCTS

CARBON MONOXIDE AND ASPHYXIANTS

R000000042301

POLYMERIZATION

POLYMERIZATION WILL NOT OCCUR.

SECTION 7 PROTECTION INFORMATION

VENTILATION

VENTILATE AS NEEDED TO COMPLY WITH EXPOSURE LIMIT.

PERSONAL PROTECTIVE EQUIPMENT

E PRODUCT MINIMALLY IRRITATING TO EYES. LOCAL SAFETY POLICY DECISION.

GLOVES IMPERVIOUS GLOVES RECOMMENDED WHEN PROLONGED SKIN CONTACT CANNOT BE AVOIDED.

RESPIRATOR CONCENTRATION-IN-AIR DETERMINES PROTECTION NEEDED. USE ONLY NIOSH CERTIFIED RESPIRATORY PROTECTION. RESPIRATORY PROTECTION USUALLY NOT NEEDED UNLESS PRODUCT IS HEATED OR MISTED.

OTHER IF CONTACT IS UNAVOIDABLE, WEAR IMPERVIOUS PROTECTIVE GEAR. LAUNDRY SOILED CLOTHES.

SECTION 8 DISPOSAL PROCEDURES

AQUATIC TOXICITY

NOT DETERMINED

SPILL, LEAK OR RELEASE

CONTAIN SPILL. ADVISE EPA; STATE AGENCY IF REQUIRED. ABSORB ON INERT MATERIAL.

WASTE DISPOSAL

FOLLOW FEDERAL, STATE AND LOCAL REGULATIONS. DO NOT FLUSH TO DRAIN/ STORM SEWER. INCINERATE UNDER CONTROLLED CONDITIONS. CONTRACT TO AUTHORIZED DISPOSAL SERVICE.

SECTION 9 SPECIAL PRECAUTIONS

STORAGE AND HANDLING CONDITIONS

FPA CLASS IIIB STORAGE. AVOID PROLONGED BREATHING OF MIST OR VAPOR. AVOID PROLONGED OR REPEATED CONTACT WITH SKIN. WASH THOROUGHLY AFTER HANDLING.

SECTION 10 PRECAUTIONARY LABEL (IF APPLICABLE)

NO ADDITIONAL PRECAUTIONS AND LABELS

Sun Refining and
Marketing Company

THIS PRODUCT SAFETY INFORMATION IS PROVIDED PERIODICALLY TO ASSIST OUR CUSTOMERS IN ASSESSING COMPLIANCE WITH HEALTH/SAFETY/ENVIRONMENTAL REGULATIONS. PLEASE FORWARD THIS TO YOUR MANAGER OF SAFETY AND HEALTH. THIS IS THE FIRST FORM PRINTED FOR YOU FOR THIS PRODUCT

SUN CODE

PRINTED: 85/12/07

R00000013102

SECTION 1 IDENTIFICATION

NAME

SUNTHENE 4240

SYNONYMS

REV. DATE

10/02/85

CAS REGISTRY NO.

64742-52-5

CAS NAME

HYDROTREATED HEAVY NAPHTHENIC DISTILLATE

UNIVERSAL CONTAINER
STEEL DRUM CORPORATION
2ND & PRICE STREET
TRAINER

PA 19013

CHEMICAL FAMILY

PETROLEUM OIL

SUN REFINING

AND MARKETING COMPANY

TEN PENN CENTER 1801 MARKET STREET

PHILADELPHIA PA 19103

INFORMATION SUPPLIED BY

AND PHONE

JONATHAN M. HAAS

(215) 293-6321

SECTION 2 INGREDIENTS

MATERIAL(S)

EVERELY HYDROTREATED, CHEMICALLY NEUTRALIZED, HEAVY NAPHTHENIC DISTILLATE IS A COMPLEX COMBINATION OF HYDROCARBONS OBTAINED BY TREATING A PETROLEUM FRACTION WITH HYDROGEN IN THE PRESENCE OF A CATALYST. IT CONSISTS OF HYDROCARBONS HAVING HYDROCARBON NUMBERS PREDOMINANTLY IN THE RANGE OF C20 THROUGH C50 AND PRODUCES A FINISHED OIL OF APPROX. 2400 SUS AT 100F. IT CONTAINS RELATIVELY FEW NORMAL PARAFFINS.

SECTION 3 PHYSICAL DATA

BOILING POINT: 760 mm Hg WIDE RANGE °F. WIDE RANGE °CMELTING POINT: N/A °F. N/A °CSPECIFIC GRAVITY: (H₂O = 1) 0.93PACKING DENSITY: (WHEN APPLICABLE) Kg/m³ N/AVAPOR PRESSURE: (mm Hg AT 20°C) 0.0001VAPOR DENSITY: (AIR = 1) 13+SOLUBILITY IN H₂O: (% BY VOL.) NIL% VOLATILES BY VOL.: NILEVAPORATION RATE: (ETHYL ETHER = 1) 1000 X SLOWERpH INFORMATION: pH N/A @ g/l H₂O

OCTANOL/WATER

PARTITION COEFFICIENT: N.D.APPEARANCE PALE YELLOW, VISCOUSAND ODOR: LITTLE ODOR.ODOR THRESHOLD (ppm) N.D.

SECTION 4 FIRE AND EXPLOSION DATA (CONT. ON PAGE 2)

FLASH POINT: 430 MINIMUM C.C.C. °F. 222 MINIMUM C.C.C. °CAUTOIGNITION TEMPERATURE: 705 ESTIMATED °F. 374 ESTIMATED °C

NFPA CLASSIFICATION

HEALTH 0 FIRE 1 REACTIVITY 0

SPECIFIC HAZARD

HAZARD RATING

LEAST 0	SLIGHT 1
MODERATE 2	HIGH 3
	EXTREME 4

FLAMMABLE LIMITS IN AIR

LOWER EXPLOSIVE LEVEL (LEL) NOT DETERMINED % VOL.UPPER EXPLOSIVE LEVEL (UEL) NOT DETERMINED % VOL.

FIRE AND EXPLOSION HAZARDS

CAN BE MADE TO BURN (FLASH POINT GREATER THAN 200F).

SUN CODE

R00000013102

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EXTINGUISHING MEDIA

WATER FOG. CHEMICAL FOAM. DRY CHEMICAL POWDER.
CARBON DIOXIDE.

SPECIAL FIRE FIGHTING INSTRUCTIONS

WEAR SELF-CONTAINED BREATHING APPARATUS WHEN FIRE
FIGHTING IN CONFINED SPACE.

SECTION 5 HEALTH HAZARD INFORMATION

EXPOSURE LIMITS

HR. TIME WEIGHTED PERMISSIBLE EXPOSURE 5.0 MG/M3 . GOVERNMENT REGULATION.

ROUTES OF EXPOSURE AND EFFECTS

INHALATION NO EFFECTS EXPECTED.

SKIN NO SKIN EFFECTS EXPECTED. DRAIZE SKIN IRRITATION SCORE IS: 0.66 OUT OF 8.0

EYE NO EYE EFFECT EXPECTED. IRRITATION SCORE 2.0 2.0 0.0 0.0 0.0 OUT OF 110.0 AT 1 6 24
48 72 (HOURS)INGESTION PRACTICALLY NON-TOXIC (LD50 > 15G/KG). LD50 IN RATS IS: >30 GRAMS PER KILOGRAM OF RAT BODY
WEIGHT.

FIRST AID

INHALATION NONE NORMALLY REQUIRED.

SKIN WASH WITH SOAP AND WATER UNTIL NO ODOR REMAINS.

EYE FLUSH WITH WATER.

INGESTION VOMITING MAY BE INDUCED BUT IS NOT REQUIRED. OBTAIN MEDICAL ASSISTANCE. SMALL AMOUNTS WHICH
ACCIDENTALLY ENTER MOUTH SHOULD BE RINSED OUT UNTIL TASTE OF IT IS GONE.

SECTION 6 REACTIVITY DATA (CONT. ON PAGE 3)

STABILITY

STABLE.

INCOMPATIBLE MATERIALS

STRONG OXIDIZERS.

HAZARDOUS DECOMPOSITION PRODUCTS

CARBON MONOXIDE AND ASPHYXIANTS.

00000013102

POLYMERIZATION

POLYMERIZATION WILL NOT OCCUR.

SECTION 7 PROTECTION INFORMATION

VENTILATION

VENTILATE AS NEEDED TO COMPLY WITH EXPOSURE LIMIT.

PERSONAL PROTECTIVE EQUIPMENT

PRODUCT MINIMALLY IRRITATING TO EYES. LOCAL SAFETY POLICY DECISION.

PRODUCT MINIMALLY IRRITATING TO SKIN. LOCAL SAFETY POLICY DECISION.

RESPIRATOR CONCENTRATION-IN-AIR DETERMINES PROTECTION NEEDED. USE ONLY NIOSH CERTIFIED RESPIRATORY PROTECTION. RESPIRATORY PROTECTION USUALLY NOT NEEDED UNLESS PRODUCT IS HEATED OR MISTED.

OTHER NONE NORMALLY NEEDED.

SECTION 8 DISPOSAL PROCEDURES

AQUATIC TOXICITY

NOT DETERMINED.

SPILL, LEAK OR RELEASE

CONTAIN SPILL. ABSORB ON INERT MATERIAL.

WASTE DISPOSAL

FOLLOW FEDERAL, STATE AND LOCAL REGULATIONS. DO NOT FLUSH TO DRAIN/ STORM SEWER. INCINERATE UNDER CONTROLLED CONDITIONS. CONTRACT TO AUTHORIZED DISPOSAL SERVICE.

SECTION 9 SPECIAL PRECAUTIONS

STORAGE AND HANDLING CONDITIONS

FPA CLASS IIIB STORAGE.

SECTION 10 PRECAUTIONARY LABEL (IF APPLICABLE)

NO ADDITIONAL PRECAUTIONS AND LABELS

MATERIAL SAFETY DATA SHEET

PAGE 1



Sun Refining and Marketing Company

THIS PRODUCT SAFETY INFORMATION IS PROVIDED PERIODICALLY TO ASSIST OUR CUSTOMERS IN ASSESSING COMPLIANCE WITH HEALTH/SAFETY/ENVIRONMENTAL REGULATIONS. PLEASE FORWARD THIS TO YOUR MANAGER OF SAFETY AND HEALTH. THIS IS THE FIRST FORM PRINTED FOR YOU FOR THIS PRODUCT

SUN CODE

R00000012902

PRINTED: 85/12/07

SECTION 1 IDENTIFICATION

NAME SUNTHENE 410		SYNONYMS	REV. DATE 08/23/85
S REGISTRY NO. 64742-52-5	CAS NAME HYDROTREATED HEAVY NAPHTHENIC DISTILLATE		
UNIVERSAL CONTAINER STEEL DRUM CORPORATION 2ND & PRICE STREET TRAINER PA 19013		CHEMICAL FAMILY PETROLEUM OIL SUN REFINING AND MARKETING COMPANY TEN PENN CENTER 1801 MARKET STREET PHILADELPHIA PA 19103	
		INFORMATION SUPPLIED BY AND PHONE JONATHAN M. HAAS (215) 293-6321	

SECTION 2 INGREDIENTS

EVERELY HYDROTREATED, CHEMICALLY NEUTRALIZED, HEAVY NAPHTHENIC DISTILLATE OIL IS FOA APPROVED THIRD GRADE MINERAL OIL, 21CFR178.3520(C). OBTAINED BY TREATING OIL WITH HYDROGEN IN THE PRESENCE OF A CATALYST. IT CONSISTS OF HYDROCARBONS HAVING HYDROCARBON NUMBERS PREDOMINANTLY IN THE RANGE OF C20 THROUGH C50 AND PRODUCES A FINISHED OIL OF APPROX. 100 SUS AT 100F. CONTAINS RELATIVELY FEW NORMAL PARAFFINS.

SECTION 3 PHYSICAL DATA

BILING POINT: 760 mm Hg WIDE RANGE °F. WIDE RANGE °C	VAPOR PRESSURE: (mm Hg AT 20°C) NIL	pH INFORMATION: pH N/A @ _____ g/l H ₂ O
ELTING POINT: N/A °F. N/A °C	VAPOR DENSITY: (AIR = 1) 1.0	OCTANOL/WATER PARTITION COEFFICIENT: N.D.
ECIFIC GRAVITY: (H ₂ O=1) 0.90	SOLUBILITY IN H ₂ O: (% BY VOL.) NIL	APPEARANCE COLORLESS FLUID.
CKING DENSITY: (WHEN APPLICABLE) Kg/m ³ N/A	% VOLATILES BY VOL.: NIL	AND ODOR: LITTLE ODOR
	EVAPORATION RATE: (ETHYL ETHER = 1) 1000 X SLOWER	ODOR THRESHOLD (ppm) 11.0

SECTION 4 FIRE AND EXPLOSION DATA (CONT. ON PAGE 2)

ASH POINT: **320 MINIMUM CDC** °F. **159 MINIMUM CDC** °C. AUTOIGNITION TEMPERATURE: **675 ESTIMATED** °F. **357 ESTIMATED** °C.

NFPA CLASSIFICATION			HAZARD RATING			FLAMMABLE LIMITS IN AIR	
ALTH 0	FIRE 1	REACTIVITY 2	LEAST 0	SLIGHT 1		LOWER EXPLOSIVE LEVEL (LEL) NOT DETERMINED	% VOL
ECIFIC HAZARD			MODERATE 2	HIGH 3	EXTREME 4	UPPER EXPLOSIVE LEVEL (UEL) NOT DETERMINED	% VOL

FIRE AND EXPLOSION HAZARDS

CAN BE MADE TO BURN (FLASH POINT GREATER THAN 200F).

SUN CODE

R00000012902

MATERIAL SAFETY DATA SHEET

PAGE 2

SUN CODE

00000012902

EXTINGUISHING MEDIA

WATER FOG. CHEMICAL FOAM. DRY CHEMICAL POWDER.
CARBON DIOXIDE.

SPECIAL FIRE FIGHTING INSTRUCTIONS

WEAR SELF-CONTAINED BREATHING APPARATUS WHEN FIRE
FIGHTING IN CONFINED SPACE.

SECTION 5 HEALTH HAZARD INFORMATION

EXPOSURE LIMITS

HR. TIME WEIGHTED PERMISSIBLE EXPOSURE 5.0 MG/M3 . GOVERNMENT REGULATION.

ROUTES OF EXPOSURE AND EFFECTS

INHALATION NO EFFECTS EXPECTED.

SKIN PRACTICALLY NON-TOXIC IF ABSORBED (LD50 GREATER THAN 2000 MG/KG). MILD IRRITATION WITH PROLONGED OR
REPEATED CONTACT. DRAIZE SKIN IRRITATION SCORE IS: 2.50 OUT OF 8.0

EYE CONTACT WITH THE EYE MAY CAUSE TEMPORARY SMARTING. NO PERMANENT DAMAGE EXPECTED.

INGESTION PRACTICALLY NON-TOXIC (LD50 > 15G/KG). LD50 IN RATS IS: >30 GRAMS PER KILOGRAM OF RAT BODY
WEIGHT.

FIRST AID

INHALATION NONE NORMALLY REQUIRED.

SKIN WASH WITH SOAP AND WATER UNTIL NO ODOR REMAINS.

EYE FLUSH WITH WATER.

INGESTION VOMITING MAY BE INDUCED BUT IS NOT REQUIRED. SMALL AMOUNTS WHICH ACCIDENTALLY ENTER MOUTH SHOULD BE
RINSED OUT UNTIL TASTE OF IT IS GONE.

SECTION 6 REACTIVITY DATA (CONT. ON PAGE 3)

STABILITY

STABLE.

INCOMPATIBLE MATERIALS

STRONG OXIDIZERS.

HAZARDOUS DECOMPOSITION PRODUCTS

CARBON MONOXIDE AND ASPHYXIANTS.

ORIGINAL
(Red)

MATERIAL SAFETY DATA SHEET

PAGE 3

SUN CODE

000000012902

POLYMERIZATION

POLYMERIZATION WILL NOT OCCUR.

SECTION 7 PROTECTION INFORMATION

VENTILATION

VENTILATE AS NEEDED TO COMPLY WITH EXPOSURE LIMIT.

PERSONAL PROTECTIVE EQUIPMENT

EYE PRODUCT MINIMALLY IRRITATING TO EYES. LOCAL SAFETY POLICY DECISION.

GLOVES IMPERVIOUS GLOVES RECOMMENDED WHEN PROLONGED SKIN CONTACT CANNOT BE AVOIDED.

RESPIRATOR CONCENTRATION-IN-AIR DETERMINES PROTECTION NEEDED. USE ONLY NIOSH CERTIFIED RESPIRATORY PROTECTION.
RESPIRATORY PROTECTION USUALLY NOT NEEDED UNLESS PRODUCT IS HEATED OR MISTED.

OTHER NONE NORMALLY NEEDED.

SECTION 8 DISPOSAL PROCEDURES

AQUATIC TOXICITY

NOT DETERMINED

SPILL, LEAK OR RELEASE

CONTAIN SPILL. ABSORB ON INERT MATERIAL.

WASTE DISPOSAL

FOLLOW FEDERAL, STATE AND LOCAL REGULATIONS. DO NOT FLUSH TO DRAIN/ STORM SEWER. INCINERATE UNDER CONTROLLED CONDITIONS. CONTRACT TO AUTHORIZED DISPOSAL SERVICE.

SECTION 9 SPECIAL PRECAUTIONS

STORAGE AND HANDLING CONDITIONS

NFPA CLASS IIIB STORAGE. WASH THOROUGHLY AFTER HANDLING.

SECTION 10 PRECAUTIONARY LABEL (IF APPLICABLE)

NO ADDITIONAL PRECAUTIONS AND LABELS

ORIGINAL
(Red)Sun Refining and
Marketing Company

MATERIAL SAFETY DATA SHEET

PAGE 1

THIS PRODUCT SAFETY INFORMATION IS PROVIDED PERIODICALLY TO ASSIST OUR CUSTOMERS IN ASSESSING COMPLIANCE WITH HEALTH/SAFETY/ENVIRONMENTAL REGULATIONS. PLEASE FORWARD THIS TO YOUR MANAGER OF SAFETY AND HEALTH. THIS IS THE FIRST FORM PRINTED FOR YOU FOR THIS PRODUCT

SUN CODE

R00000115500

PRINTED: 85/12/07
SECTION 1 IDENTIFICATIONNAME **SUN REFRIGERATION 400** SYNONYMSREV. DATE
03/03/81CAS REGISTRY NO. CAS NAME
NO CLASSIFICATION - MIXTURE

UNIVERSAL CONTAINER
STEEL DRUM CORPORATION
2ND & PRICE STREET
TRAINER PA 19013

CHEMICAL FAMILY **BLEND**
**SUN REFINING
AND MARKETING COMPANY
TEN PENN CENTER 1801 MARKET STREET
PHILADELPHIA PA 19103**
INFORMATION SUPPLIED BY
AND PHONE **RAMONA PANSON
(215) 293-6323**

SECTION 2 INGREDIENTS

ATERIAL(S)
**OLVENT REFINED HEAVY PARAFFINIC DISTILLATE, CAS #6474188; METHACRYLATE COPOLYMER WITH A TRACE OF SILICONE
OLYMER.**

SECTION 3 PHYSICAL DATA

OILING POINT: 760 mm Hg **HIGH WITH °F. WIDE RANGE °C**
VAPOR PRESSURE: (mm Hg AT 20°C) **NIL** pH INFORMATION: pH **N/A** @ **g/l H₂O**
VAPOR DENSITY: (AIR = 1) **1.8**
MELTING POINT: **N/A °F. N/A °C** SOLUBILITY IN H₂O: (% BY VOL.) **NIL** OCTANOL/WATER
PARTITION COEFFICIENT: **N.D.**
SPECIFIC GRAVITY: (H₂O=1) **0.89** % VOLATILES BY VOL: **NIL** APPEARANCE **AMBER FLUID.**
PACKING DENSITY: (Kg/m³) **N/A** EVAPORATION RATE: **1000X SLOWER** AND ODOR: **SLIGHT ODOR.**
WHEN APPLICABLE) (ETHYL ETHER = 1) ODOR THRESHOLD (ppm) **N.D.**

SECTION 4 FIRE AND EXPLOSION DATA (CONT. ON PAGE 2)

FLASH POINT: **625 MINIMUM CDC °F. 218 MINIMUM CDC °C.** AUTOIGNITION TEMPERATURE: **125 ESTIMATED °F. 385 ESTIMATED °C.**

NFPA CLASSIFICATION			HAZARD RATING			FLAMMABLE LIMITS IN AIR	
HEALTH	<u>0</u>	FIRE	<u>1</u>	REACTIVITY	<u>1</u>	LOWER EXPLOSIVE LEVEL (LEL)	<u>NOT DETERMINED</u> % VOL.
SPECIFIC HAZARD						UPPER EXPLOSIVE LEVEL (UEL)	<u>NOT DETERMINED</u> % VOL.

FIRE AND EXPLOSION HAZARDS

CAN BE MADE TO BURN (FLASH POINT GREATER THAN 200°F).

SUN CODE
R00000115500

EXTINGUISHING MEDIA

WATER FOG. CHEMICAL FOAM. DRY CHEMICAL POWDER.
CARBON DIOXIDE.

SPECIAL FIRE FIGHTING INSTRUCTIONS

WEAR SELF-CONTAINED BREATHING APPARATUS WHEN FIRE
FIGHTING IN CONFINED SPACE.

00000115500

SECTION 5 HEALTH HAZARD INFORMATION

EXPOSURE LIMITS

HR. TIME WEIGHTED PERMISSIBLE EXPOSURE 5.0 MG/M3 . GOVERNMENT REGULATION.

ROUTES OF EXPOSURE AND EFFECTS

INHALATION NO EFFECTS EXPECTED.

SKIN PRACTICALLY NON-TOXIC IF ABSORBED (LD50 GREATER THAN 2000 MG/KG). NO SKIN EFFECTS EXPECTED.

EYE CONTACT WITH THE EYE MAY CAUSE TEMPORARY SMARTING. NO PERMANENT DAMAGE EXPECTED.

INGESTION PRACTICALLY NON-TOXIC (LD50 > 15G/KG).

FIRST AID

INHALATION NONE NORMALLY REQUIRED.

SKIN WASH WITH SOAP AND WATER UNTIL NO ODOR REMAINS.

EYES FLUSH WITH WATER.

INGESTION GIVE LIQUIDS AND INDUCE VOMITING UNLESS VICTIM IS UNCONSCIOUS. OBTAIN MEDICAL ASSISTANCE. SWALLOWED
SUBSTANCES WHICH ACCIDENTALLY ENTER MOUTH SHOULD BE RINSED OUT UNTIL TASTE OF IT IS GONE.

SECTION 6 REACTIVITY DATA (CONT. ON PAGE 3)

STABILITY

INCOMPATIBLE MATERIALS

HAZARDOUS DECOMPOSITION PRODUCTS

TABLE.

STRONG OXIDIZERS.

CARBON MONOXIDE AND ASPHYXIANTS

R00000115500

POLYMERIZATION

POLYMERIZATION WILL NOT OCCUR.

SECTION 7 PROTECTION INFORMATION

VENTILATION

VENTILATE AS NEEDED TO COMPLY WITH EXPOSURE LIMIT.

PERSONAL PROTECTIVE EQUIPMENT

EYE PRODUCT MINIMALLY IRRITATING TO EYES. LOCAL SAFETY POLICY DECISION.

GLOVES PRODUCT MINIMALLY IRRITATING TO SKIN. LOCAL SAFETY POLICY DECISION.

RESPIRATOR CONCENTRATION-IN-AIR DETERMINES PROTECTION NEEDED. USE ONLY NIOSH CERTIFIED RESPIRATORY PROTECTION.

OTHER NONE NORMALLY NEEDED.

SECTION 8 DISPOSAL PROCEDURES

AQUATIC TOXICITY

NOT DETERMINED

SPILL, LEAK OR RELEASE

ABSORB ON INERT MATERIAL.

WASTE DISPOSAL

FOLLOW FEDERAL, STATE AND LOCAL REGULATIONS.

SECTION 9 SPECIAL PRECAUTIONS

STORAGE AND HANDLING CONDITIONS

NFPA CLASS IIIB STORAGE.

SECTION 10 PRECAUTIONARY LABEL (IF APPLICABLE)

NO ADDITIONAL PRECAUTIONS AND LABELS



MATERIAL SAFETY DATA SHEET

PAGE 1

Sun Refining and
Marketing Company

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PRINTED FOR YOU FOR THIS PRODUCT

SUN CODE

R00000126800

PRINTED: 85/12/07

SECTION 1 IDENTIFICATION

AME

SUNTRANS II

SYNONYMS

REV. DATE

11/27/85

AS REGISTRY NO

N/A

CAS NAME

NO CLASSIFICATION--MIXTURE

CHEMICAL FAMILY

BLEND

UNIVERSAL CONTAINER
STEEL DRUM CORPORATION
2ND & PRICE STREET
TRAINER

PA 19013

SUN REFINING
AND MARKETING COMPANY
TEN PENN CENTER 1801 MARKET STREET
PHILADELPHIA PA 19103

INFORMATION SUPPLIED BY
AND PHONE

RAMONA PANSON
(215) 293-6323

SECTION 2 INGREDIENTS

ATERIAL(S)

HEMICALLY NEUTRALIZED, SEVERELY HYDROTREATED, LIGHT NAPHTHENIC DISTILLATE (PETROLEUM) CAS# 64742-52-5;
5-DI-TERT-BUTYLPHENOL CAS# 5875-45-6.

SECTION 3 PHYSICAL DATA

OILING POINT: 760 mm Hg WIDE RANGE °F. WIDE RANGE °CMELTING POINT: N/A °F. N/A °CSPECIFIC GRAVITY: (H₂O = 1) 0.83LOADING DENSITY: (WHEN APPLICABLE) Kg/m³ N/AVAPOR PRESSURE: (mm Hg AT 20°C) 0.0008VAPOR DENSITY: (AIR = 1) 8.5SOLUBILITY IN H₂O: (% BY VOL.) NIL% VOLATILES BY VOL.: NILEVAPORATION RATE: (ETHYL ETHER = 1) 1000X SLOWERpH INFORMATION: pH N/A @ _____ g/l H₂OOCTANOL/WATER
PARTITION COEFFICIENT: N.D.APPEARANCE COLORLESS FLUID.AND ODOR: LITTLE ODOR.ODOR THRESHOLD (ppm) N.D.

SECTION 4 FIRE AND EXPLOSION DATA (CONT. ON PAGE 2)

FLASH POINT: 293 MINIMUM CJC °F. 145 MINIMUM CJC °C. AUTOIGNITION TEMPERATURE: 605 ESTIMATED °F. 318 ESTIMATED °C.

NFPA CLASSIFICATION

HEALTH 0 FIRE 1 REACTIVITY 2

SPECIFIC HAZARD

HAZARD RATING

LEAST SLIGHT
0 1
MODERATE HIGH EXTREME
2 3 4

FLAMMABLE LIMITS IN AIR

LOWER EXPLOSIVE LEVEL (LEL) NOT DETERMINED % VOL.UPPER EXPLOSIVE LEVEL (UEL) NOT DETERMINED % VOL.

FIRE AND EXPLOSION HAZARDS

CAN BE MADE TO BURN (FLASH POINT GREATER THAN 200°F).

SUN CODE

R00000126800

MATERIAL SAFETY DATA SHEET

PAGE 2

SUN CODE

00000126800

EXTINGUISHING MEDIA

ATER FOG. CHEMICAL FOAM. DRY CHEMICAL POWDER.
ARBON DIOXIDE.

SPECIAL FIRE FIGHTING INSTRUCTIONS

WEAR SELF-CONTAINED BREATHING APPARATUS WHEN FIRE
FIGHTING IN CONFINED SPACE.

SECTION 5 HEALTH HAZARD INFORMATION

EXPOSURE LIMITS

HR. TIME WEIGHTED PERMISSIBLE EXPOSURE 5.0 MG/M3 . SUN RECOMMENDATION.

ROUTES OF EXPOSURE AND EFFECTS

HALATION EXCESSIVE EXPOSURES MAY CAUSE IRRITATION TO EYES, NOSE, THROAT. NO ACUTE EFFECTS EXPECTED TO TWICE
XPOSURE LIMIT.

KIN PRACTICALLY NON-TOXIC IF ABSORBED (LD50 GREATER THAN 2000 MG/KG). MODERATE IRRITATION REMOVES NATURAL
ILS & FATS FROM SKIN WITH PROLONGED OR REPEATED CONTACT. ESTIMATED ORAIZE SKIN IRRITATION SCORE IS: 4.0
UT OF 8.0 ESTIMATED DERMAL LD50 IN RABBITS IS: > 5,000 MG/KG

YE CONTACT WITH THE EYE MAY CAJSE MILD IRRITATION.

NGESTION HARMFUL OR FATAL IF SWALLOWED. PULMONARY ASPIRATION HAZARD IF SWALLOWED AND VOMITING OCCURS.
STIMATED LD50 IN RATS IS: >15 GRAMS PER KILOGRAM OF RAT BOD

FIRST AID

HALATION MOVE PERSON TO FRESH AIR.

KIN WASH WITH SOAP AND WATER UNTIL NO ODOR REMAINS. WASH CLOTHING BEFORE REUSE.

YE FLUSH WITH WATER FOR AT LEAST 15 MINUTES. IF IRRITATION PERSISTS, OBTAIN MEDICAL ASSISTANCE.

NGESTION DO NOT INDUCE VOMITTING! DO NOT GIVE LIQUIDS! OBTAIN MEDICAL ASSISTANCE. SMALL AMOUNTS WHICH
CCIDENTALLY ENTER MOUTH SHOULD BE RINSED OUT UNTIL TASTE OF IT IS GONE.

SECTION 6 REACTIVITY DATA (CONT. ON PAGE 3)

STABILITY

TABLE.

INCOMPATIBLE MATERIALS

STRONG OXIDIZERS.

HAZARDOUS DECOMPOSITION PRODUCTS

CARBON MONOXIDE AND ASPHYXIANTS

K00000126800

POLYMERIZATION

POLYMERIZATION WILL NOT OCCUR.

SECTION 7 PROTECTION INFORMATION

VENTILATION

VENTILATE AS NEEDED TO COMPLY WITH EXPOSURE LIMIT.

PERSONAL PROTECTIVE EQUIPMENT

EYE PRODUCT MINIMALLY IRRITATING TO EYES. LOCAL SAFETY POLICY DECISION.

GLOVES IMPERVIOUS GLOVES RECOMMENDED WHEN PROLONGED SKIN CONTACT CANNOT BE AVOIDED.

RESPIRATOR CONCENTRATION-IN-AIR DETERMINES PROTECTION NEEDED. USE ONLY NIOSH CERTIFIED RESPIRATORY PROTECTION. RESPIRATORY PROTECTION USUALLY NOT NEEDED UNLESS PRODUCT IS HEATED OR MISTED.

OTHER IF CONTACT IS UNAVOIDABLE, WEAR IMPERVIOUS PROTECTIVE GEAR. LAUNDRY SOILED CLOTHES.

SECTION 8 DISPOSAL PROCEDURES

AQUATIC TOXICITY

NOT DETERMINED

SPILL, LEAK OR RELEASE

CONTAIN SPILL. ABSORB ON INERT MATERIAL.

WASTE DISPOSAL

FOLLOW FEDERAL, STATE AND LOCAL REGULATIONS. DO NOT FLUSH TO DRAIN/ STORM SEWER. CONTRACT TO AUTHORIZED DISPOSAL SERVICE.

SECTION 9 SPECIAL PRECAUTIONS

STORAGE AND HANDLING CONDITIONS

HFEPA CLASS IIIB STORAGE. AVOID PROLONGED BREATHING OF MIST OR VAPOR. AVOID PROLONGED OR REPEATED CONTACT WITH SKIN. WASH THOROUGHLY AFTER HANDLING.

SECTION 10 PRECAUTIONARY LABEL (IF APPLICABLE)

NO ADDITIONAL PRECAUTIONS AND LABELS

MATERIAL SAFETY DATA SHEET

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Sun Refining and Marketing Company

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SUN CODE

PRINTED: 85/12/07

R00000125001

SECTION 1 IDENTIFICATION

NAME SUN HEAT TRANSFER 21	SYNONYMS PETROLEUM DISTILLATE	REV. DATE 10/28/85
S REGISTRY NO. 64741-88-4	CAS NAME SOLVENT REFINED HEAVY PARAFFINIC DISTILLATE (PETROLEUM)	
[UNIVERSAL CONTAINER STEEL DRUM CORPORATION 2ND & PRICE STREET TRAINER PA 19013]		CHEMICAL FAMILY PETROLEUM HYDROCARBON OIL SUN REFINING AND MARKETING COMPANY TEN PENN CENTER 1801 MARKET STREET PHILADELPHIA PA 19103 INFORMATION SUPPLIED BY AND PHONE RAMONA D. PANSON (215) 293-6323

SECTION 2 INGREDIENTS

EVERELY SOLVENT REFINED, HEAVY PARAFFINIC DISTILLATE 100% IS A COMPLEX COMBINATION OF HYDROCARBONS OBTAINED AS THE RAFFINATE FROM A SOLVENT EXTRACTION PROCESS. IT CONSISTS PREDOMINANTLY OF SATURATED HYDROCARBONS HAVING CARBON NUMBERS PREDOMINANTLY IN THE RANGE OF C20 THRU C50 AND PRODUCES A FINISHED OIL OF APPROXIMATELY 200 TO 215 SUS AT 100F.

SECTION 3 PHYSICAL DATA

OILING POINT: 760 mm Hg WIDE RANGE °F. WIDE RANGE °C MELTING POINT: N/A °F. N/A °C SPECIFIC GRAVITY: (H ₂ O = 1) 0.85 PACKING DENSITY: (WHEN APPLICABLE) Kg/m ³ N/A	VAPOR PRESSURE: (mm Hg AT 20°C) <0.0001 VAPOR DENSITY: (AIR = 1) >10 SOLUBILITY IN H ₂ O: (% BY VOL.) NIL % VOLATILES BY VOL.: NIL EVAPORATION RATE: (ETHYL ETHER = 1) 1000X SLOWER	pH INFORMATION: pH N/A @ _____ g/l H ₂ O OCTANOL/WATER PARTITION COEFFICIENT: N.D. APPEARANCE AND ODOR: AMBER FLUID SLIGHT ODOR ODOR THRESHOLD (ppm) N.D.
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SECTION 4 FIRE AND EXPLOSION DATA (CONT. ON PAGE 2)

FLASH POINT: **610 MINIMUM COC °F. 210 MINIMUM COC °C.** AUTOIGNITION TEMPERATURE: **670 ESTIMATED °F. 356 ESTIMATED °C.**

NFPA CLASSIFICATION			HAZARD RATING			FLAMMABLE LIMITS IN AIR	
HEALTH	FIRE	REACTIVITY	LEAST	SLIGHT		LOWER EXPLOSIVE LEVEL (LEL)	% VOL.
0	1	2	0	1		NOT DETERMINED	
SPECIFIC HAZARD			MODERATE	HIGH	EXTREME	UPPER EXPLOSIVE LEVEL (UEL)	% VOL.
			2	3	4	NOT DETERMINED	

FIRE AND EXPLOSION HAZARDS

CAN BE MADE TO BURN (FLASH POINT GREATER THAN 200F).

SUN CODE

R00000125001

00000125001

EXTINGUISHING MEDIA

WATER FOG. CHEMICAL FOAM. DRY CHEMICAL POWDER.
CARBON DIOXIDE.

SPECIAL FIRE FIGHTING INSTRUCTIONS

WEAR SELF-CONTAINED BREATHING APPARATUS WHEN FIRE
FIGHTING IN CONFINED SPACE.

SECTION 5 HEALTH HAZARD INFORMATION

EXPOSURE LIMITS

REL. TIME WEIGHTED PERMISSIBLE EXPOSURE 5.0 MG/M3 . GOVERNMENT REGULATION.

ROUTES OF EXPOSURE AND EFFECTS

IRRITATION NO EFFECTS EXPECTED.

APPROXIMATELY NON-TOXIC IF ABSORBED (LD50 GREATER THAN 2000 MG/KG). MINIMAL IRRITATION WITH PROLONGED OR
REPEATED CONTACT. ESTIMATED DRAIZE SKIN IRRITATION SCORE IS: 0.3 OUT OF 8.0 ESTIMATED DERMAL LD50 IN
RABBITS IS: > 5,000 MG/KG

NO EYE EFFECT EXPECTED.

SECTION 5 PRACTICALLY NON-TOXIC (LD50 > 15G/KG). ESTIMATED LD50 IN RATS IS: > 25 GRAMS PER KILOGRAM OF RAT
BY

FIRST AID

IRRITATION NONE NORMALLY REQUIRED.

WASH WITH SOAP AND WATER UNTIL NO ODOR REMAINS. WASH CLOTHING BEFORE REUSE.

FLUSH WITH WATER. IF IRRITATION PERSISTS, OBTAIN MEDICAL ASSISTANCE.

SECTION 5 VOMITING MAY BE INDUCED BUT IS NOT REQUIRED. OBTAIN MEDICAL ASSISTANCE. SMALL AMOUNTS WHICH
ACCIDENTALLY ENTER MOUTH SHOULD BE RINSED OUT UNTIL TASTE OF IT IS GONE.

SECTION 6 REACTIVITY DATA (CONT. ON PAGE 3)

STABILITY

STABLE.

INCOMPATIBLE MATERIALS

STRONG OXIDIZERS

HAZARDOUS DECOMPOSITION PRODUCTS

CARBON MONOXIDE AND ASPHYXIANTS

R00000125001

POLYMERIZATION

POLYMERIZATION WILL NOT OCCUR.

SECTION 7 PROTECTION INFORMATION

VENTILATION

VENTILATE AS NEEDED TO COMPLY WITH EXPOSURE LIMIT.

PERSONAL PROTECTIVE EQUIPMENT

E PRODUCT MINIMALLY IRRITATING TO EYES. LOCAL SAFETY POLICY DECISION.

OVES PRODUCT MINIMALLY IRRITATING TO SKIN. LOCAL SAFETY POLICY DECISION.

SPIRATOR CONCENTRATION-IN-AIR DETERMINES PROTECTION NEEDED. USE ONLY NIOSH CERTIFIED RESPIRATORY PROTECTION. RESPIRATORY PROTECTION USUALLY NOT NEEDED UNLESS PRODUCT IS HEATED OR MISTED.

HER IF CONTACT IS UNAVOIDABLE, WEAR IMPERVIOUS PROTECTIVE GEAR. LAUNDRY SOILED CLOTHES.

SECTION 8 DISPOSAL PROCEDURES

AQUATIC TOXICITY

NOT DETERMINED

SPILL, LEAK OR RELEASE

CONTAIN SPILL. ADVISE EPA; STATE AGENCY IF REQUIRED. ABSORB ON INERT MATERIAL.

WASTE DISPOSAL

FOLLOW FEDERAL, STATE AND LOCAL REGULATIONS. DO NOT FLUSH TO DRAIN/ STORM SEWER. INCINERATE UNDER CONTROLLED CONDITIONS. CONTRACT TO AUTHORIZED DISPOSAL SERVICE.

SECTION 9 SPECIAL PRECAUTIONS

STORAGE AND HANDLING CONDITIONS

FPA CLASS IIIB STORAGE. AVOID PROLONGED BREATHING OF MIST OR VAPOR. AVOID PROLONGED OR REPEATED CONTACT WITH SKIN. WASH THOROUGHLY AFTER HANDLING.

SECTION 10 PRECAUTIONARY LABEL (IF APPLICABLE)

NO ADDITIONAL PRECAUTIONS AND LABELS

ORIGINAL
(Red)

MATERIAL SAFETY DATA SHEET

PAGE 1

Sun Refining and
Marketing Company

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SUN CODE

PRINTED: 85/11/30

R0000014250

SECTION 1 IDENTIFICATION

NAME **SUNVIS 775 (150)**

SYNONYMS

REV. DATE
12/17/81

CAS REGISTRY NO.

CAS NAME **NO CLASSIFICATION - MIXTURE**

UNIVERSAL CONTAINER
STEEL DRUM CORPORATION
2ND & PRICE STREET
TRAINER PA 19013

CHEMICAL FAMILY **BLEND**

SUN REFINING
AND MARKETING COMPANY
TEN PENN CENTER 1801 MARKET STREET
PHILADELPHIA PA 19103

INFORMATION SUPPLIED BY
AND PHONE **RAMONA PANSON
(215) 293-6323**

SECTION 2 INGREDIENTS

MATERIAL(S)
SOLVENT REFINED HEAVY PARAFFINIC DISTILLATE OIL, CAS #64741884; ZINC DITHIOPHOSPHATE AND BARIUM SULFONATE; METHACRYLATE COPOLYMER; AND A TRACE OF SILICONE POLYMER. TYPICALLY CONTAINS: 0.083% BARIUM, 0.056% ZINC, AND 0.052% PHOSPHORUS.

SECTION 3 PHYSICAL DATA

BOILING POINT: 760 mm Hg **WIDE RANGE** °F. **WIDE RANGE** °CMELTING POINT: **N/A** °F. **N/A** °CSPECIFIC GRAVITY: (H₂O=1) **0.88**PACKING DENSITY: (WHEN APPLICABLE) Kg/m³ **N/A**VAPOR PRESSURE: (mm Hg AT 20°C) **NIL**VAPOR DENSITY: (AIR = 1) **17+**SOLUBILITY IN H₂O: (% BY VOL.) **NIL**% VOLATILES BY VOL.: **NIL**EVAPORATION RATE: (ETHYL ETHER = 1) **1000X SLOWER**pH INFORMATION: pH **N/A** @ _____ g/l H₂OOCTANOL/WATER
PARTITION COEFFICIENT: **N.D.**APPEARANCE **AMBER FLUID**AND ODOR: **LITTLE ODOR**ODOR THRESHOLD (ppm) **N.D.**

SECTION 4 FIRE AND EXPLOSION DATA (CONT. ON PAGE 2)

FLASH POINT: **490 MINIMUM COC** °F. **254 MINIMUM COC** °C. AUTOIGNITION TEMPERATURE: **730 ESTIMATED** °F. **388 ESTIMATED** °C.

NFPA CLASSIFICATION

HEALTH **0** FIRE **1** REACTIVITY **0**

SPECIFIC HAZARD

HAZARD RATING

LEAST 0	SLIGHT 1
MODERATE 2	HIGH 3
	EXTREME 4

FLAMMABLE LIMITS IN AIR

LOWER EXPLOSIVE LEVEL (LEL) **NOT DETERMINED** % VUPPER EXPLOSIVE LEVEL (UEL) **NOT DETERMINED** % V

FIRE AND EXPLOSION HAZARDS

CAN BE MADE TO BURN (FLASH POINT GREATER THAN 200F).

SUN CODE

R00000142500

ORIGINAL
(Red)

MATERIAL SAFETY DATA SHEET

PAGE 2

SUN CODE

00000142500

EXTINGUISHING MEDIA

WATER FOG. CHEMICAL FOAM. DRY CHEMICAL POWDER.
CARBON DIOXIDE.

SPECIAL FIRE FIGHTING INSTRUCTIONS

WEAR SELF-CONTAINED BREATHING APPARATUS WHEN FIRE
FIGHTING IN CONFINED SPACE.

SECTION 5 HEALTH HAZARD INFORMATION

EXPOSURE LIMITS

8HR. TIME WEIGHTED PERMISSIBLE EXPOSURE 5.0 MG/M3 . SUN RECOMMENDATION.

ROUTES OF EXPOSURE AND EFFECTS

INHALATION NO EFFECTS EXPECTED.

SKIN PRACTICALLY NON-TOXIC IF ABSORBED (LD50 GREATER THAN 2000 MG/KG). NO SKIN EFFECTS EXPECTED.

EYE CONTACT WITH THE EYE MAY CAUSE TEMPORARY SMARTING. NO PERMANENT DAMAGE EXPECTED.

INGESTION PRACTICALLY NON-TOXIC (LD50 > 156/KG).

FIRST AID

INHALATION NONE NORMALLY REQUIRED.

SKIN WASH WITH SOAP AND WATER UNTIL NO ODOR REMAINS. WASH CLOTHING BEFORE REUSE.

EYE FLUSH WITH WATER.

INGESTION GIVE LIQUIDS AND INDUCE VOMITING UNLESS VICTIM IS UNCONSCIOUS. OBTAIN MEDICAL ASSISTANCE. SMALL
AMOUNTS WHICH ACCIDENTALLY ENTER MOUTH SHOULD BE RINSED OUT UNTIL TASTE OF IT IS GONE.

SECTION 6 REACTIVITY DATA (CONT. ON PAGE 3)

STABILITY	INCOMPATIBLE MATERIALS	HAZARDOUS DECOMPOSITION PRODUCTS
STABLE.	STRONG OXIDIZERS.	CARBON MONOXIDE AND ASPHYXIANTS

ORIGINAL
(Red)

MATERIAL SAFETY DATA SHEET

PAGE 3

SUN CODE

0000014250

POLYMERIZATION
POLYMERIZATION WILL NOT OCCUR.

SECTION 7 PROTECTION INFORMATION
VENTILATION

VENTILATE AS NEEDED TO COMPLY WITH EXPOSURE LIMIT.

PERSONAL PROTECTIVE EQUIPMENT

EYE **PRODUCT MINIMALLY IRRITATING TO EYES. LOCAL SAFETY POLICY DECISION.**

GLOVES **PRODUCT MINIMALLY IRRITATING TO SKIN. LOCAL SAFETY POLICY DECISION.**

RESPIRATOR **CONCENTRATION-IN-AIR DETERMINES PROTECTION NEEDED. USE ONLY NIOSH CERTIFIED RESPIRATORY PROTECTION. RESPIRATORY PROTECTION USUALLY NOT NEEDED UNLESS PRODUCT IS HEATED OR MISTED.**

OTHER **NONE NORMALLY NEEDED.**

SECTION 8 DISPOSAL PROCEDURES

AQUATIC TOXICITY
NOT DETERMINED

SPILL, LEAK OR RELEASE

ABSORB ON INERT MATERIAL.

WASTE DISPOSAL

FOLLOW FEDERAL, STATE AND LOCAL REGULATIONS.

SECTION 9 SPECIAL PRECAUTIONS

STORAGE AND HANDLING CONDITIONS
MFPA CLASS IIII3 STORAGE.

SECTION 10 PRECAUTIONARY LABEL (IF APPLICABLE)

NO ADDITIONAL PRECAUTIONS AND LABELS

ORIGINAL
(Red)

MATERIAL SAFETY DATA SHEET

PAGE 1

SUNSun Refining and
Marketing Company

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PERIODICALLY TO ASSIST OUR CUSTOMERS IN ASSESSING
COMPLIANCE WITH HEALTH/SAFETY/ENVIRONMENTAL
REGULATIONS. PLEASE FORWARD THIS TO YOUR MANAGER
OF SAFETY AND HEALTH. THIS IS THE FIRST FORM
PRINTED FOR YOU FOR THIS PRODUCT

SUN CODE

PRINTED: 85/11/30

870000 372300

SECTION 1 IDENTIFICATION	
NAME SUNVIS 831 WR (68)	SYNONYMS
CAS REGISTRY NO.	CAS NAME NO CLASSIFICATION - MIXTURE

REV. DATE
06/11/81

UNIVERSAL CONTAINER
STEEL DRUM CORPORATION
2ND & PRICE STREET
TRAINER PA 19013

CHEMICAL FAMILY
PETROLEUM BLEND
**SUN REFINING
AND MARKETING COMPANY**
**TEN PENN CENTER 1801 MARKET STREET
PHILADELPHIA PA 19103**
INFORMATION SUPPLIED BY
AND PHONE
**RAMONA PANSON
(215) 293-6323**

SECTION 2 INGREDIENTS
MATERIAL(S) BLEND OF SOLVENT REFINED HEAVY PARAFFINIC DISTILLATES (CAS# 6474188) ; PROPRIETARY ANTIOXIDANT (KNOWN TO CONTAIN SULFUR, ZINC, PHOSPHORUS) DEFOAMER.
TYPICALLY...ZINC 0.082% ; PHOSPHORUS 0.063%.

SECTION 3 PHYSICAL DATA		
BOILING POINT: 760 mm Hg HIGH WITH °F. WIDE RANGE °C	VAPOR PRESSURE: (mm Hg AT 20°C) BELOW 0.0001	pH INFORMATION: pH N/A @ _____ g/l H
MELTING POINT: N/A °F. _____ °C	VAPOR DENSITY: (AIR = 1) 15+	OCTANOL/WATER PARTITION COEFFICIENT: N.D.
SPECIFIC GRAVITY: (H ₂ O=1) 0.87	SOLUBILITY IN H ₂ O: (% BY VOL.) NIL	APPEARANCE AMBER FLUID
PACKING DENSITY: (WHEN APPLICABLE) Kg/m ³ N/A	% VOLATILES BY VOL.: NIL	AND ODOR: IGHT ODOR
	EVAPORATION RATE: (ETHYL ETHER = 1) 1000X SLOWER	ODOR THRESHOLD (ppm) N.D.

SECTION 4 FIRE AND EXPLOSION DATA (CONT. ON PAGE 2)		
FLASH POINT: 425 CDC MINIMUM °F. _____ °C	AUTOIGNITION TEMPERATURE: 700 ESTIMATED °F. _____ °C	
NFPA CLASSIFICATION	HAZARD RATING	FLAMMABLE LIMITS IN AIR
HEALTH 0 FIRE 1 REACTIVITY 0	LEAST 0 SLIGHT 1	LOWER EXPLOSIVE LEVEL (LEL) NOT DETERMINED % V
SPECIFIC HAZARD	MODERATE 2 HIGH 3 EXTREME 4	UPPER EXPLOSIVE LEVEL (UEL) NOT DETERMINED % V

FIRE AND EXPLOSION HAZARDS	
CAN BE MADE TO BURN (FLASH POINT GREATER THAN 200F).	

SUN CODE
R00000372300

ORIGINAL
(Red)

MATERIAL SAFETY DATA SHEET

PAGE 2

SUN CODE

0000032230

EXTINGUISHING MEDIA
WATER FOG. CHEMICAL FOAM. DRY CHEMICAL POWDER.
CARBON DIOXIDE.

SPECIAL FIRE FIGHTING INSTRUCTIONS
WEAR SELF-CONTAINED BREATHING APPARATUS WHEN FIRE
FIGHTING IN CONFINED SPACE.

SECTION 5 HEALTH HAZARD INFORMATION

EXPOSURE LIMITS

8HR. TIME WEIGHTED PERMISSIBLE EXPOSURE 005.0 MG/M3 . SUN RECOMMENDATION.

ROUTES OF EXPOSURE AND EFFECTS

INHALATION NO EFFECTS EXPECTED.

SKIN PRACTICALLY NON-TOXIC IF ABSORBED (LD50 GREATER THAN 2000 MG/KG). MILD IRRITATION WITH PROLONGED OR
REPEATED CONTACT.

EYE CONTACT WITH THE EYE MAY CAUSE MILD IRRITATION.

INGESTION PRACTICALLY NON-TOXIC (LD50 > 15G/KG).

FIRST AID

INHALATION NONE NORMALLY REQUIRED.

SKIN WASH WITH SOAP AND WATER UNTIL NO ODOR REMAINS.

EYE FLUSH WITH WATER FOR AT LEAST 15 MINUTES. IF IRRITATION PERSISTS, OBTAIN MEDICAL ASSISTANCE.

INGESTION GIVE LIQUIDS AND INDUCE VOMITING UNLESS VICTIM IS UNCONSCIOUS. OBTAIN MEDICAL ASSISTANCE. SMALL
AMOUNTS WHICH ACCIDENTALLY ENTER MOUTH SHOULD BE RINSED OUT UNTIL TASTE OF IT IS GONE.

SECTION 6 REACTIVITY DATA (CONT. ON PAGE 3)

STABILITY

STABLE.

INCOMPATIBLE MATERIALS

INCOMPATIBLE WITH
STRONG OXIDIZERS

HAZARDOUS DECOMPOSITION PRODUCTS

CARBON MONOXIDE AND ASPHYXIANTS

ORIGINAL
(Red)

MATERIAL SAFETY DATA SHEET

PAGE 3

SUN CODE

RD000037230

POLYMERIZATION

POLYMERIZATION WILL NOT OCCUR.

SECTION 7 PROTECTION INFORMATION

VENTILATION

VENTILATE AS NEEDED TO COMPLY WITH EXPOSURE LIMIT.

PERSONAL PROTECTIVE EQUIPMENT

EYE SPLASH PROOF CHEMICAL GOGGLES

GLOVES IMPERVIOUS GLOVES RECOMMENDED WHEN PROLONGED SKIN CONTACT CANNOT BE AVOIDED.

RESPIRATOR CONCENTRATION-IN-AIR DETERMINES PROTECTION NEEDED. USE ONLY NIOSH CERTIFIED RESPIRATORY PROTECTION.

OTHER NONE NORMALLY NEEDED.

SECTION 8 DISPOSAL PROCEDURES

AQUATIC TOXICITY

NOT DETERMINED

SPILL, LEAK OR RELEASE

ABSORB ON INERT MATERIAL.

WASTE DISPOSAL

FOLLOW FEDERAL, STATE AND LOCAL REGULATIONS.

SECTION 9 SPECIAL PRECAUTIONS

STORAGE AND HANDLING CONDITIONS

NFPA CLASS IIIIB STORAGE.

SECTION 10 PRECAUTIONARY LABEL (IF APPLICABLE)

NO ADDITIONAL PRECAUTIONS AND LABELS

MATERIAL SAFETY DATA SHEET

PAGE 1



Sun Refining and Marketing Company

THIS PRODUCT SAFETY INFORMATION IS PROVIDED PERIODICALLY TO ASSIST OUR CUSTOMERS IN ASSESSING COMPLIANCE WITH HEALTH/SAFETY/ENVIRONMENTAL REGULATIONS. PLEASE FORWARD THIS TO YOUR MANAGER OF SAFETY AND HEALTH. THIS IS THE FIRST FORM PRINTED FOR YOU FOR THIS PRODUCT

SUN CODE

R7000037230

PRINTED: 85/11/30

SECTION 1 IDENTIFICATION

NAME SUNVIS 831 WR (68)	SYNONYMS	REV. DATE 06/11/81
CAS REGISTRY NO.	CAS NAME NO CLASSIFICATION - MIXTURE	

UNIVERSAL CONTAINER
STEEL DRUM CORPORATION
2ND & PRICE STREET
TRAINER PA 19013

CHEMICAL FAMILY
PETROLEUM BLEND
SUN REFINING AND MARKETING COMPANY
TEN PENN CENTER 1801 MARKET STREET
PHILADELPHIA PA 19103
INFORMATION SUPPLIED BY
RAMONA PANSON
(215) 293-6323

SECTION 2 INGREDIENTS

MATERIAL(S)
BLEND OF SOLVENT REFINED HEAVY PARAFFINIC DISTILLATES (CAS# 6474188); PROPRIETARY ANTIOXIDANT (KNOWN TO CONTAIN SULFUR, ZINC, PHOSPHORUS) DEFOAMER.
WITH TRACE OF METHACRYLATE COPOLYMER AND TYPICALLY...ZINC 0.082%; PHOSPHORUS 0.063%.

SECTION 3 PHYSICAL DATA

BOILING POINT: 760 mm Hg HIGH WITH °F. WIDE RANGE °C	VAPOR PRESSURE: (mm Hg AT 20°C) BELOW 0.0001	pH INFORMATION: pH N/A @ _____ g/l H ₂
MELTING POINT: N/A °F. _____ °C	VAPOR DENSITY: (AIR = 1) 15+	OCTANOL/WATER PARTITION COEFFICIENT: N.D.
SPECIFIC GRAVITY: (H ₂ O = 1) 0.87	SOLUBILITY IN H ₂ O: (% BY VOL.) NIL	APPEARANCE AMBER FLUID SL
PACKING DENSITY: (WHEN APPLICABLE) Kg/m ³ N/A	% VOLATILES BY VOL.: NIL	AND ODOR: IGHT ODOR
	EVAPORATION RATE: (ETHYL ETHER = 1) 1000X SLOWER	ODOR THRESHOLD (ppm) N.D.

SECTION 4 FIRE AND EXPLOSION DATA (CONT. ON PAGE 2)

FLASH POINT: **625 CDC MINIMUM** °F. _____ °C. AUTOIGNITION TEMPERATURE: **700 ESTIMATED** °F. _____ °C.

NFPA CLASSIFICATION	HAZARD RATING	FLAMMABLE LIMITS IN AIR
HEALTH 0 FIRE 1 REACTIVITY 0	LEAST 0 SLIGHT 1 MODERATE 2 HIGH 3 EXTREME 4	LOWER EXPLOSIVE LEVEL (LEL) NOT DETERMINED % VOL UPPER EXPLOSIVE LEVEL (UEL) NOT DETERMINED % VOL

FIRE AND EXPLOSION HAZARDS

CAN BE MADE TO BURN (FLASH POINT GREATER THAN 200F).

SUN CODE

R00000372300

MATERIAL SAFETY DATA SHEET

PAGE 2

SUN CODE

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2. EXTINGUISHING MEDIA

JATER FOG. CHEMICAL FOAM. DRY CHEMICAL POWDER.
CARBON DIOXIDE.

SPECIAL FIRE FIGHTING INSTRUCTIONS

WEAR SELF-CONTAINED BREATHING APPARATUS WHEN FIRE
FIGHTING IN CONFINED SPACE.

SECTION 5 HEALTH HAZARD INFORMATION

5.1 EXPOSURE LIMITS

3HR. TIME WEIGHTED PERMISSIBLE EXPOSURE 005.0 MG/M3 . SUN RECOMMENDATION.

5.2 ROUTES OF EXPOSURE AND EFFECTS

INHALATION NO EFFECTS EXPECTED.

SKIN PRACTICALLY NON-TOXIC IF ABSORBED (LD50 GREATER THAN 2000 MG/KG). MILD IRRITATION WITH PROLONGED OR
REPEATED CONTACT.

EYE CONTACT WITH THE EYE MAY CAUSE MILD IRRITATION.

INGESTION PRACTICALLY NON-TOXIC (LD50 > 15G/KG).

FIRST AID

INHALATION NONE NORMALLY REQUIRED.

SKIN WASH WITH SOAP AND WATER UNTIL NO ODOR REMAINS.

EYE FLUSH WITH WATER FOR AT LEAST 15 MINUTES. IF IRRITATION PERSISTS, OBTAIN MEDICAL ASSISTANCE.

INGESTION GIVE LIQUIDS AND INDUCE VOMITING UNLESS VICTIM IS UNCONSCIOUS. OBTAIN MEDICAL ASSISTANCE. SMALL
AMOUNTS WHICH ACCIDENTALLY ENTER MOUTH SHOULD BE RINSED OUT UNTIL TASTE OF IT IS GONE.

SECTION 6 REACTIVITY DATA (CONT. ON PAGE 3)

STABILITY

STABLE.

INCOMPATIBLE MATERIALS

INCOMPATIBLE WITH
STRONG OXIDIZERS

HAZARDOUS DECOMPOSITION PRODUCTS

CARBON MONOXIDE AND ASPHYXIANTS

ORIGI
(Red)

MATERIAL SAFETY DATA SHEET

PAGE 3

SUN CODE

0000037230

POLYMERIZATION

POLYMERIZATION WILL NOT OCCUR.

SECTION 7 PROTECTION INFORMATION

VENTILATION

VENTILATE AS NEEDED TO COMPLY WITH EXPOSURE LIMIT.

PERSONAL PROTECTIVE EQUIPMENT

EYE SPLASH PROOF CHEMICAL GOGGLES

GLOVES IMPERVIOUS GLOVES RECOMMENDED WHEN PROLONGED SKIN CONTACT CANNOT BE AVOIDED.

RESPIRATOR CONCENTRATION-IN-AIR DETERMINES PROTECTION NEEDED. USE ONLY NIOSH CERTIFIED RESPIRATORY PROTECTION.

OTHER NONE NORMALLY NEEDED.

SECTION 8 DISPOSAL PROCEDURES

AQUATIC TOXICITY

NOT DETERMINED

SPILL, LEAK OR RELEASE

ABSORB ON INERT MATERIAL.

WASTE DISPOSAL

FOLLOW FEDERAL, STATE AND LOCAL REGULATIONS.

SECTION 9 SPECIAL PRECAUTIONS

STORAGE AND HANDLING CONDITIONS

MFPA CLASS IIIB STORAGE.

SECTION 10 PRECAUTIONARY LABEL (IF APPLICABLE)

NO ADDITIONAL PRECAUTIONS AND LABELS

MATERIAL SAFETY DATA SHEET

PAGE 1



Sun Refining and Marketing Company

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SUN CODE

PRINTED: 85/11/30

0000014290

SECTION 1 IDENTIFICATION		SYNONYMS		REV. DATE
NAME SUNVIS 916 (32)		PETROLEUM BASED LUBRICATING OIL		11/18/85
AS REGISTRY NO.	CAS NAME	NO CLASSIFICATION - MIXTURE		
UNIVERSAL CONTAINER STEEL DRUM CORPORATION 2ND & PRICE STREET TRAINER PA 19013		CHEMICAL FAMILY BLEND SUN REFINING AND MARKETING COMPANY TEN PENN CENTER 1831 MARKET STREET PHILADELPHIA PA 19103 INFORMATION SUPPLIED BY AND PHONE RAMONA PANSON (215) 293-6323		

SECTION 2 INGREDIENTS			
MATERIAL(S) SEVERELY SOLVENT REFINED HEAVY PARAFFINIC DISTILLATE (PETROLEUM) CASE # 64741-88-4; DI-TER-BUTYL PARACRESOL CAS # 128-37-0; MIXED ALKYLATED DIPHENYLAMINES; ZINC DITHIODIAMYL CARBAMATE; METHACRYLATE COPOLYMER; TRACE SILICONE POLYMER.			
SECTION 3 PHYSICAL DATA			
BOILING POINT: 760 mm Hg. <u>WIDE RANGE</u> °F. <u>WIDE RANGE</u> °C	VAPOR PRESSURE: (mm Hg AT 20°C) <u>Nil</u>	pH INFORMATION: pH <u>N/A</u> @ _____ g/l H ₂ O	
MELTING POINT: <u>N/A</u> °F. <u>N/A</u> °C	VAPOR DENSITY: (AIR = 1) <u>12+</u>	OCTANOL/WATER PARTITION COEFFICIENT: <u>N.D.</u>	
SPECIFIC GRAVITY: (H ₂ O = 1) <u>0.86</u>	SOLUBILITY IN H ₂ O: (% BY VOL.) <u>Nil</u>	APPEARANCE <u>LIGHT AMBER FLUID.</u>	
PACKING DENSITY: (WHEN APPLICABLE) Kg/m ³ <u>N/A</u>	% VOLATILES BY VOL.: <u>Nil</u>	AND ODOR: <u>LITTLE ODOR.</u>	
	EVAPORATION RATE: (ETHYL ETHER = 1) <u>1000X SLOWER</u>	ODOR THRESHOLD (ppm) <u>N.D.</u>	

SECTION 4 FIRE AND EXPLOSION DATA (CONT. ON PAGE 2)			
FLASH POINT: <u>390 MINIMUM COC</u> °F. <u>198 MINIMUM COC</u> °C		AUTOIGNITION TEMPERATURE: <u>685 ESTIMATED</u> °F. <u>363 ESTIMATED</u> °C	
NFPA CLASSIFICATION		HAZARD RATING	FLAMMABLE LIMITS IN AIR
HEALTH <u>0</u>	FIRE <u>1</u>	REACTIVITY <u>0</u>	
SPECIFIC HAZARD		LEAST 0 SLIGHT 1 MODERATE 2 HIGH 3 EXTREME 4	LOWER EXPLOSIVE LEVEL (LEL) <u>NOT DETERMINED</u> % VOL UPPER EXPLOSIVE LEVEL (UEL) <u>NOT DETERMINED</u> % VOL

FIRE AND EXPLOSION HAZARDS		SUN CODE
CAN BE MADE TO BURN (FLASH POINT GREATER THAN 200F).		0000014290

MATERIAL SAFETY DATA SHEET

PAGE 2

SUN CODE

0000014290

EXTINGUISHING MEDIA
WATER FOG. CHEMICAL FOAM. DRY CHEMICAL POWDER.
CARBON DIOXIDE.

SPECIAL FIRE FIGHTING INSTRUCTIONS
WEAR SELF-CONTAINED BREATHING APPARATUS WHEN FIRE
FIGHTING IN CONFINED SPACE.

SECTION 5 HEALTH HAZARD INFORMATION

EXPOSURE LIMITS
HR. TIME WEIGHTED PERMISSIBLE EXPOSURE 5.0 MG/M3 . SUN RECOMMENDATION.

ROUTES OF EXPOSURE AND EFFECTS
INHALATION NO ACUTE EFFECTS EXPECTED TO TWICE EXPOSURE LIMIT.

KIN PRACTICALLY NON-TOXIC IF ABSORBED (LD50 GREATER THAN 2000 MG/KG). MINIMAL IRRITATION WITH PROLONGED OR
REPEATED CONTACT.

EYE CONTACT WITH THE EYE MAY CAUSE MINIMAL IRRITATION.

INGESTION PRACTICALLY NON-TOXIC (LD50 > 15G/KG).

FIRST AID
INHALATION NONE NORMALLY REQUIRED.

KIN WASH WITH SOAP AND WATER UNTIL NO ODOR REMAINS.

EYE FLUSH WITH WATER.

INGESTION GIVE LIQUIDS AND INDUCE VOMITING UNLESS VICTIM IS UNCONSCIOUS. OBTAIN MEDICAL ASSISTANCE. SMALL
AMOUNTS WHICH ACCIDENTALLY ENTER MOUTH SHOULD BE RINSED OUT UNTIL TASTE OF IT IS GONE.

SECTION 6 REACTIVITY DATA (CONT. ON PAGE 3)

STABILITY	INCOMPATIBLE MATERIALS	HAZARDOUS DECOMPOSITION PRODUCTS
TABLE.	STRONG OXIDIZERS.	CARBON MONOXIDE AND ASPHYXIANTS

POLYMERIZATION

POLYMERIZATION WILL NOT OCCUR.**SECTION 7 PROTECTION INFORMATION**

VENTILATION

VENTILATE AS NEEDED TO COMPLY WITH EXPOSURE LIMIT.

PERSONAL PROTECTIVE EQUIPMENT

EYE PRODUCT MINIMALLY IRRITATING TO EYES. LOCAL SAFETY POLICY DECISION.**GLOVES PRODUCT MINIMALLY IRRITATING TO SKIN. LOCAL SAFETY POLICY DECISION.****RESPIRATOR CONCENTRATION-IN-AIR DETERMINES PROTECTION NEEDED. USE ONLY NIOSH CERTIFIED RESPIRATORY PROTECTION. RESPIRATORY PROTECTION USUALLY NOT NEEDED UNLESS PRODUCT IS HEATED OR MISTED.****OTHER IF CONTACT IS UNAVOIDABLE, WEAR IMPERVIOUS PROTECTIVE GEAR. LAUNDRY SOILED CLOTHES.****SECTION 8 DISPOSAL PROCEDURES**

AQUATIC TOXICITY

NOT DETERMINED

SPILL, LEAK OR RELEASE

CONTAIN SPILL. ADVISE EPA; STATE AGENCY IF REQUIRED. ABSORB ON INERT MATERIAL.

WASTE DISPOSAL

FOLLOW FEDERAL, STATE AND LOCAL REGULATIONS. DO NOT FLUSH TO DRAIN/ STORM SEWER. INCINERATE UNDER CONTROLLED CONDITIONS. CONTRACT TO AUTHORIZED DISPOSAL SERVICE.**SECTION 9 SPECIAL PRECAUTIONS**

STORAGE AND HANDLING CONDITIONS

MFPA CLASS III STORAGE. AVOID PROLONGED BREATHING OF MIST OR VAPOR. AVOID PROLONGED OR REPEATED CONTACT WITH SKIN. WASH THOROUGHLY AFTER HANDLING.**SECTION 10 PRECAUTIONARY LABEL (IF APPLICABLE)****NO ADDITIONAL PRECAUTIONS AND LABELS**

MATERIAL SAFETY DATA SHEET

PAGE 1



Sun Refining and
Marketing Company

THIS PRODUCT SAFETY INFORMATION IS PROVIDED
PERIODICALLY TO ASSIST OUR CUSTOMERS IN ASSESSING
COMPLIANCE WITH HEALTH/SAFETY/ENVIRONMENTAL
REGULATIONS. PLEASE FORWARD THIS TO YOUR MANAGER
OF SAFETY AND HEALTH. THIS IS THE FIRST FORM
PRINTED FOR YOU FOR THIS PRODUCT

SUN CODE

PRINTED: 85/11/30

R000G014300

SECTION 1 IDENTIFICATION

NAME **SUNVIS 921 (46)**

SYNONYMS

REV. DATE
12/17/81

CAS REGISTRY NO.

CAS NAME **NO CLASSIFICATION - MIXTURE**

UNIVERSAL CONTAINER
STEEL DRUM CORPORATION
2ND & PRICE STREET
TRAINER PA 19013

CHEMICAL FAMILY
BLEN

SUN REFINING
AND MARKETING COMPANY
TEN PENN CENTER 1801 MARKET STREET
PHILADELPHIA PA 19103

INFORMATION SUPPLIED BY
AND PHONE **RAMONA PANSON
(215) 293-6323**

SECTION 2 INGREDIENTS

MATERIAL(S)
SOLVENT HEAVY REFINED PARAFFINIC DISTILLATE, CAS #64741884; METHACRYLATE POLYMER; MIXED ALKYLATED
DIPHENYLAMINES; DITERTIARY BUTYL PARACRESOL; ZINC DITHIO DIALKYL CARBAMATE; TETRAPHENYL SUCCINIC
ANHYDRIDE; AND SILICONE POLYMER.

SECTION 3 PHYSICAL DATA

BOILING POINT: 760 mm Hg **WIDE RANGE** °F. **WIDE RANGE** °C

MELTING POINT: **N/A** °F. **N/A** °C

SPECIFIC GRAVITY: (H₂O = 1) **0.87**

PACKING DENSITY: (WHEN APPLICABLE) Kg/m³ **N/A**

VAPOR PRESSURE: (mm Hg AT 20°C) **NIL**
VAPOR DENSITY: (AIR = 1) **10+**

SOLUBILITY IN H₂O: (% BY VOL.) **NIL**

% VOLATILES BY VOL.: **NIL**

EVAPORATION RATE:
(ETHYL ETHER = 1) **1000X SLOWER**

pH INFORMATION: pH **N/A** @ _____ g/l H₂O

OCTANOL/WATER
PARTITION COEFFICIENT: **N.D.**

APPEARANCE **LIGHT AMBER FLUID.**
AND ODOR: **LITTLE ODOR.**
ODOR THRESHOLD (ppm) **N.D.**

SECTION 4 FIRE AND EXPLOSION DATA (CONT. ON PAGE 2)

FLASH POINT: **410 MINIMUM COC** °F. **210 MINIMUM COC** °C

AUTOIGNITION TEMPERATURE: **695 ESTIMATED** °F. **368 ESTIMATED** °C.

NFPA CLASSIFICATION

HEALTH **0** FIRE **1** REACTIVITY **0**

SPECIFIC HAZARD

HAZARD RATING

LEAST 0 SLIGHT 1
MODERATE 2 HIGH 3 EXTREME 4

FLAMMABLE LIMITS IN AIR

LOWER EXPLOSIVE LEVEL (LEL) **NOT DETERMINED** % V

UPPER EXPLOSIVE LEVEL (UEL) **NOT DETERMINED** % V

FIRE AND EXPLOSION HAZARDS

CAN BE MADE TO BURN (FLASH POINT GREATER THAN 200F).

SUN CODE

R00000143000

MATERIAL SAFETY DATA SHEET

PAGE 2

SUN CODE

1000014300

EXTINGUISHING MEDIA

WATER FOG. CHEMICAL FOAM. DRY CHEMICAL POWDER.
CARBON DIOXIDE.

SPECIAL FIRE FIGHTING INSTRUCTIONS

WEAR SELF-CONTAINED BREATHING APPARATUS WHEN FIRE
FIGHTING IN CONFINED SPACE.

SECTION 5 HEALTH HAZARD INFORMATION

EXPOSURE LIMITS

8HR. TIME WEIGHTED PERMISSIBLE EXPOSURE 5.0 MG/M3 . SUN RECOMMENDATION.

ROUTES OF EXPOSURE AND EFFECTS

INHALATION NO EFFECTS EXPECTED.

SKIN PRACTICALLY NON-TOXIC IF ABSORBED (LD50 GREATER THAN 2000 MG/KG). NO SKIN EFFECTS EXPECTED.

EYE CONTACT WITH THE EYE MAY CAUSE TEMPORARY SMARTING. NO PERMANENT DAMAGE EXPECTED.

INGESTION PRACTICALLY NON-TOXIC (LD50 > 15G/KG).

FIRST AID

INHALATION NONE NORMALLY REQUIRED.

SKIN WASH WITH SOAP AND WATER UNTIL NO ODOR REMAINS.

EYE FLUSH WITH WATER.

INGESTION GIVE LIQUIDS AND INDUCE VOMITING UNLESS VICTIM IS UNCONSCIOUS. OBTAIN MEDICAL ASSISTANCE. SMALL AMOUNTS WHICH ACCIDENTALLY ENTER MOUTH SHOULD BE RINSED OUT UNTIL TASTE OF IT IS GONE.

SECTION 6 REACTIVITY DATA (CONT. ON PAGE 3)

STABILITY

STABLE.

INCOMPATIBLE MATERIALS

STRONG OXIDIZERS.

HAZARDOUS DECOMPOSITION PRODUCTS

CARBON MONOXIDE AND ASPHYXIANTS

ORIGINAL
(Red)

MATERIAL SAFETY DATA SHEET

PAGE 3

SUN CODE

RD 000014300

POLYMERIZATION

POLYMERIZATION WILL NOT OCCUR.

SECTION 7 PROTECTION INFORMATION

VENTILATION

VENTILATE AS NEEDED TO COMPLY WITH EXPOSURE LIMIT.

PERSONAL PROTECTIVE EQUIPMENT

EYE PRODUCT MINIMALLY IRRITATING TO EYES. LOCAL SAFETY POLICY DECISION.

GLOVES PRODUCT MINIMALLY IRRITATING TO SKIN. LOCAL SAFETY POLICY DECISION.

RESPIRATOR RESPIRATORY PROTECTION USUALLY NOT NEEDED UNLESS PRODUCT IS HEATED OR MISTED.

OTHER NONE NORMALLY NEEDED.

SECTION 8 DISPOSAL PROCEDURES

AQUATIC TOXICITY

NOT DETERMINED

SPILL, LEAK OR RELEASE

ABSORB ON INERT MATERIAL.

WASTE DISPOSAL

FOLLOW FEDERAL, STATE AND LOCAL REGULATIONS.

SECTION 9 SPECIAL PRECAUTIONS

STORAGE AND HANDLING CONDITIONS

NFPA CLASS III3 STORAGE.

SECTION 10 PRECAUTIONARY LABEL (IF APPLICABLE)

NO ADDITIONAL PRECAUTIONS AND LABELS

ORIGINAL
(Red)

MATERIAL SAFETY DATA SHEET

PAGE 1

SUNSun Refining and
Marketing Company

(Arco)

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SUN CODE

R00000153755

PRINTED: 85/11/30

SECTION 1 IDENTIFICATION

NAME **AR10331 SUPREME 10W-40** SYNONYMS **ENGINE OIL.**REV. DATE **11/25/85**CAS REGISTRY NO. CAS NAME **NO CLASSIFICATION - MIXTURE**

ATLANTIC RICHFIELD COMPANY
ATTENTION - MR. DAVID F. ENGEL
P. O. BOX 353 BLDG. 8
NEWTOWN SQ. PA 19073

CHEMICAL FAMILY **BLEN**
SUN REFINING
AND MARKETING COMPANY
TEN PENN CENTER 1801 MARKET STREET
PHILADELPHIA PA 19103

INFORMATION SUPPLIED BY
AND PHONE **RANDNA PANSON**
(215) 293-6323

SECTION 2 INGREDIENTS

MATERIAL(S)
SEVERELY SOLVENT REFINED HEAVY PARAFFINIC DISTILLATE (PETROLEUM) CAS# 64741-88-4; ETHYLENE PROPYLENE COPOLYMER CAS# 9010-79-1; ZINC DIALKYL DITHIOPHOSPHATE CAS# 68457-79-4; MAGNESIUM SULFONATE CAS# 61789-87-5; SODIUM SULFONATE CAS# 68608-26-4; CALCIUM PHENATE; POLYBUTYLENEAMIDE; POLYALKENYL SUCCINIC ANHYDRIDE. PRODUCT TYPICALLY CONTAINS 0.14% B; 0.08% CA; 0.07% MG; 0.37% N; 0.11% P; 0.12% ZINC; 0.06% NA;

SECTION 3 PHYSICAL DATA

BOILING POINT: 760 mm Hg **WIDE RANGE °F. WIDE RANGE °C**VAPOR PRESSURE: (mm Hg AT 20°C) **NIL**pH INFORMATION: pH **6.5** @ _____ g/l H₂OMELTING POINT: **N/A °F. N/A °C**VAPOR DENSITY: (AIR = 1) **10+**OCTANOL/WATER
PARTITION COEFFICIENT: **N.D.**SPECIFIC GRAVITY: (H₂O = 1) **0.88**SOLUBILITY IN H₂O: (% BY VOL) **NIL**PACKING DENSITY: Kg/m³ **N/A**% VOLATILES BY VOL: **NIL**APPEARANCE **DARK FLUID.**EVAPORATION RATE: (ETHYL ETHER = 1) **1000X SLOWER**AND ODOR: **ENGINE OIL ODOR.**ODOR THRESHOLD (ppm) **N.D.**

SECTION 4 FIRE AND EXPLOSION DATA (CONT. ON PAGE 2)

FLASH POINT: **400 TYPICAL COC °F. 204 TYPICAL COC °C** AUTOIGNITION TEMPERATURE: **685 ESTIMATED °F. 363 ESTIMATED °C**

NFPA CLASSIFICATION

HAZARD RATING

FLAMMABLE LIMITS IN AIR

HEALTH **0** FIRE **1** REACTIVITY **0**LEAST
0 SLIGHT
1LOWER EXPLOSIVE LEVEL (LEL) **NOT DETERMINED** % VOL

SPECIFIC HAZARD

MODERATE
2 HIGH
3 EXTREME
4UPPER EXPLOSIVE LEVEL (UEL) **NOT DETERMINED** % VOL

FIRE AND EXPLOSION HAZARDS

CAN BE MADE TO BURN (FLASH POINT GREATER THAN 200°F).

SUN CODE

R00000153755

MATERIAL SAFETY DATA SHEET

PAGE 2

SUN CODE

EXTINGUISHING MEDIA

WATER FOG. CHEMICAL FOAM. DRY CHEMICAL POWDER.
CARBON DIOXIDE.

SPECIAL FIRE FIGHTING INSTRUCTIONS

WEAR SELF-CONTAINED BREATHING APPARATUS WHEN FIRE
FIGHTING IN CONFINED SPACE.

1000015375

SECTION 5 HEALTH HAZARD INFORMATION

EXPOSURE LIMITS

8HR. TIME WEIGHTED PERMISSIBLE EXPOSURE 5.0 MG/M3 . SUN RECOMMENDATION.

ROUTES OF EXPOSURE AND EFFECTS

INHALATION NO ACUTE EFFECTS EXPECTED TO TWICE EXPOSURE LIMIT.

SKIN PRACTICALLY NON-TOXIC IF ABSORBED (LD50 GREATER THAN 2000 MG/KG). MILD IRRITATION WITH PROLONGED OR
REPEATED CONTACT.

EYE CONTACT WITH THE EYE MAY CAUSE MILD TO MODERATE IRRITATION.

INGESTION PRACTICALLY NON-TOXIC (LD50 > 156/KG).

FIRST AID

INHALATION MOVE PERSON TO FRESH AIR.

SKIN WASH WITH SOAP AND WATER UNTIL NO ODOR REMAINS. WASH CLOTHING BEFORE REUSE.

EYE FLUSH WITH WATER FOR AT LEAST 15 MINUTES. IF IRRITATION PERSISTS, OBTAIN MEDICAL ASSISTANCE.

INGESTION GIVE LIQUIDS AND INDUCE VOMITING UNLESS VICTIM IS UNCONSCIOUS. OBTAIN MEDICAL ASSISTANCE. SMALL
AMOUNTS WHICH ACCIDENTALLY ENTER MOUTH SHOULD BE RINSED OUT UNTIL TASTE OF IT IS GONE.

SECTION 6 REACTIVITY DATA (CONT. ON PAGE 3)

STABILITY

STABLE.

INCOMPATIBLE MATERIALS

STRONG OXIDIZERS.

HAZARDOUS DECOMPOSITION PRODUCTS

CARBON MONOXIDE AND ASPHYXIANTS.

ORIGINAL
(Reg)

MATERIAL SAFETY DATA SHEET

PAGE 3

SUN CODE

0000015375

POLYMERIZATION
POLYMERIZATION WILL NOT OCCUR.

SECTION 7 PROTECTION INFORMATION

VENTILATION
VENTILATE AS NEEDED TO COMPLY WITH EXPOSURE LIMIT.

PERSONAL PROTECTIVE EQUIPMENT
EYE SPLASH PROOF CHEMICAL GOGGLES

GLOVES IMPERVIOUS GLOVES RECOMMENDED WHEN PROLONGED SKIN CONTACT CANNOT BE AVOIDED.

RESPIRATOR CONCENTRATION-IN-AIR DETERMINES PROTECTION NEEDED. USE ONLY NIOSH CERTIFIED RESPIRATORY PROTECTION.
RESPIRATORY PROTECTION USUALLY NOT NEEDED UNLESS PRODUCT IS HEATED OR MISTED.

OTHER IF CONTACT IS UNAVOIDABLE, WEAR IMPERVIOUS PROTECTIVE GEAR. LAUNDRY SOILED CLOTHES.

SECTION 8 DISPOSAL PROCEDURES

AQUATIC TOXICITY
NOT DETERMINED

SPILL, LEAK OR RELEASE
CONTAIN SPILL. ABSORB ON INERT MATERIAL.

WASTE DISPOSAL
FOLLOW FEDERAL, STATE AND LOCAL REGULATIONS. DO NOT FLUSH TO DRAIN/ STORM SEWER. CONTRACT TO AUTHORIZED DISPOSAL SERVICE.

SECTION 9 SPECIAL PRECAUTIONS

STORAGE AND HANDLING CONDITIONS
NFPA CLASS IIII STORAGE. AVOID PROLONGED BREATHING OF MIST OR VAPOR. AVOID PROLONGED OR REPEATED CONTACT WITH SKIN. WASH THOROUGHLY AFTER HANDLING.

SECTION 10 PRECAUTIONARY LABEL (IF APPLICABLE)

CAUTION! PROLONGED OR REPEATED CONTACT WITH USED MOTOR OIL MAY BE HARMFUL TO SKIN AND COULD CAUSE SKIN CANCER. PROMPTLY WASH AFFECTED AREA WITH SOAP AND WATER.

MATERIAL SAFETY DATA SHEET

PAGE 1

SUN

Sun Refining and
Marketing Company

(ARCO)

THIS PRODUCT SAFETY INFORMATION IS PROVIDED PERIODICALLY TO ASSIST OUR CUSTOMERS IN ASSESSING COMPLIANCE WITH HEALTH/SAFETY/ENVIRONMENTAL REGULATIONS. PLEASE FORWARD THIS TO YOUR MANAGER OF SAFETY AND HEALTH. THIS FORM REPLACES OUR PREVIOUS FORM DATED 07/14/84

SUN CODE

30000164

PRINTED: 85/07/20

SECTION 1 IDENTIFICATION

NAME AR10329 SUPREME 40	SYNONYMS
CAS REGISTRY NO.	CAS NAME NO CLASSIFICATION - MIXTURE
REV. DATE 09/20/88	

ATLANTIC RICHFIELD COMPANY
ATTENTION - MR. JOHN GALLAGHER
P.O. BOX 32555
PHILADELPHIA PA 19145

CHEMICAL FAMILY
BLEND
SUN REFINING
AND MARKETING COMPANY
TEN PENN CENTER 1801 MARKET STREET
PHILADELPHIA PA 19103
INFORMATION SUPPLIED BY
AND PHONE
RAMONA PANSON
(215) 293-6321

SECTION 2 INGREDIENTS

MATERIAL(S)
SOLVENT REFINED HEAVY PARAFFINIC OIL CONTAINING A POUR DEPRESSANT AND A DETERGENT-DISPERSANT ADDITIVE.
PRODUCT TYPICALLY CONTAINS 0.114% ZINC AND 0.09% PHOSPHORUS.

SECTION 3 PHYSICAL DATA

BOILING POINT: 760 mm Hg <u>HIGH WITH WIDE RANGE</u> °C	VAPOR PRESSURE: (mm Hg AT 20°C) <u>0.0001</u>	pH INFORMATION: pH <u>7.5</u> @ <u>0</u>
MELTING POINT: <u>N/A</u> °C	VAPOR DENSITY: (AIR = 1) <u>1.1</u>	OCTANOL/WATER PARTITION COEFFICIENT: <u>N.D.</u>
SPECIFIC GRAVITY: (H ₂ O = 1) <u>0.87</u>	SOLUBILITY IN H ₂ O: (% BY VOL) <u>NIL</u>	APPEARANCE <u>AMBER FLUID</u>
PACKING DENSITY: (WHEN APPLICABLE) Kg/m ³ <u>N/A</u>	% VOLATILES BY VOL: <u>NIL</u>	AND ODOR: <u>LITTLE ODOR</u>
	EVAPORATION RATE: (ETHYL ETHER = 1) <u>100X SLOWER</u>	ODOR THRESHOLD (ppm) <u>N.D.</u>

SECTION 4 FIRE AND EXPLOSION DATA (CONT. ON PAGE 2)

FLASH POINT: 44 MINIMUM COC °F 227 MINIMUM COC °C AUTOIGNITION TEMPERATURE: 730 ESTIMATED °F 388 ESTIMATED °C

NFPA CLASSIFICATION			HAZARD RATING			FLAMMABLE LIMITS IN AIR	
HEALTH <u>1</u>	FIRE <u>1</u>	REACTIVITY <u>1</u>	LEAST 0	SLIGHT 1		LOWER EXPLOSIVE LEVEL (LEL) <u>NOT DETERMINED</u> %	
SPECIFIC HAZARD			MODERATE 2	HIGH 3	EXTREME 4	UPPER EXPLOSIVE LEVEL (UEL) <u>NOT DETERMINED</u> %	

FIRE AND EXPLOSION HAZARDS

CAN BE MADE TO BURN (FLASH POINT >200°F).

SUN CODE

30000164455

MATERIAL SAFETY DATA SHEET

PAGE 2

SUN CODE

ORIGINAL

(ARCO)

EXTINGUISHING MEDIA
WATER, FOG, CHEMICAL FOAM, DRY CHEMICAL POWDER,
CARBON DIOXIDE.

SPECIAL FIRE FIGHTING INSTRUCTIONS
WEAR SELF-CONTAINED BREATHING APPARATUS WHEN FIRE
FIGHTING IN CONFINED SPACE.

8000001644

SECTION 5 HEALTH HAZARD INFORMATION

EXPOSURE LIMITS
8HR. TIME WEIGHTED PERMISSIBLE EXPOSURE 5.0 MG/M3.

ROUTES OF EXPOSURE AND EFFECTS
INHALATION NONE EXPECTED.

SKIN PRACTICALLY NON-TOXIC IF ABSORBED (LD50 GREATER THAN 2000 MG/KG). NO SKIN EFFECTS EXPECTED

EYE CONTACT WITH THE EYE MAY CAUSE MILD IRRITATION.

INGESTION PRACTICALLY NON-TOXIC (LD50 > 15G/KG).

FIRST AID
INHALATION NONE NORMALLY REQUIRED.

SKIN WASH WITH SOAP AND WATER UNTIL NO ODOR REMAINS.

EYE FLUSH WITH WATER.

INGESTION GIVE LIQUIDS AND INDUCE VOMITING UNLESS VICTIM IS UNCONSCIOUS. OBTAIN MEDICAL ASSISTANCE. SMALL
AMOUNTS WHICH ACCIDENTALLY ENTER MOUTH SHOULD BE RINSED OUT UNTIL TASTE OF IT IS GONE.

SECTION 6 REACTIVITY DATA (CONT. ON PAGE 3)

STABILITY	INCOMPATIBLE MATERIALS	HAZARDOUS DECOMPOSITION PRODUCTS
STABLE.	STRONG OXIDIZERS.	CARBON MONOXIDE AND ASPHYXIANTS

POLYMERIZATION WILL NOT OCCUR.

SECTION 7 PROTECTION INFORMATION

VENTILATION

VENTILATE AS NEEDED TO COMPLY WITH EXPOSURE LIMIT.

PERSONAL PROTECTIVE EQUIPMENT

EYE SPLASH PROOF CHEMICAL GOGGLES

GLOVES PRODUCT MINIMALLY IRRITATING TO SKIN LOCAL SAFETY POLICY DECISION.

RESPIRATOR RESPIRATORY PROTECTION USUALLY NOT NEEDED UNLESS PRODUCT IS HEATED OR MISTED.

OTHER NONE NORMALLY NEEDED.

SECTION 8 DISPOSAL PROCEDURES

AQUATIC TOXICITY

NOT DETERMINED

SPILL, LEAK OR RELEASE

AESORJ CN INERT MATERIAL.

WASTE DISPOSAL

FOLLOW FEDERAL, STATE AND LOCAL REGULATIONS.

SECTION 9 SPECIAL PRECAUTIONS

STORAGE AND HANDLING CONDITIONS

NFPA CLASS III STORAGE.

SECTION 10 PRECAUTIONARY LABEL (IF APPLICABLE)

CAUTION! PROLONGED OR REPEATED CONTACT WITH USED MOTOR OIL MAY BE HARMFUL TO SKIN AND COULD CAUSE SKIN CANCER. PROMPTLY WASH AFFECTED AREA WITH SOAP AND WATER.

MATERIAL SAFETY DATA SHEET

PAGE 1



Sun Refining and
Marketing Company

(ARCO)

THIS PRODUCT SAFETY INFORMATION IS PROVIDED PERIODICALLY TO ASSIST OUR CUSTOMERS IN ASSESSING COMPLIANCE WITH HEALTH/SAFETY/ENVIRONMENTAL REGULATIONS. PLEASE FORWARD THIS TO YOUR MANAGER OF SAFETY AND HEALTH. THIS FORM REPLACES OUR PREVIOUS FORM DATED 3/7/20/85

SUN CODE

PRINTED: 85/11/30

R0000016625

SECTION 1 IDENTIFICATION	
NAME AR10328 SUPREME 30	SYNONYMS
CAS REGISTRY NO.	CAS NAME NO CLASSIFICATION - MIXTURE
ATLANTIC RICHFIELD COMPANY ATTENTION - MR. DAVID F. ENGEL P. O. BOX 353 BLDG. 8 NEWTOWN SQ. PA 19073	
CHEMICAL FAMILY BLEND SUN REFINING AND MARKETING COMPANY TEN PENN CENTER 1801 MARKET STREET PHILADELPHIA PA 19103	
INFORMATION SUPPLIED BY: AND PHONE RAMONA PANSON (215) 293-6323	
REV. DATE 11/25/85	

SECTION 2 INGREDIENTS
MATERIAL(S) SEVERELY SOLVENT REFINED HEAVY PARAFFINIC DISTILLATE (PETROLEUM) CAS# 64741-88-4; ZINC DIALKYL DITHIO PHOSPHATE CAS# 68457-79-4; MAGNESIUM SULFONATE CAS# 61789-87-5; SODIUM SULFONATE CAS# 68608-26-4; CALCIUM PHENATE; POLYBUTYLENEAMIDE; POLYALKENYL SUCCINIC ANHYDRIDE; METHACRYLATE COPOLYMER. PRODUCT TYPICALLY CONTAINS 0.58% CALCIUM; 0.11% MAGNESIUM; 0.57% NITROGEN; 0.12% PHOSPHORUS; 0.13% ZINC.

SECTION 3 PHYSICAL DATA		
BOILING POINT: 760 mm Hg HIGH WITH °F. WIDE RANGE °C MELTING POINT: N/A °F. N/A °C SPECIFIC GRAVITY: (H ₂ O = 1) 0.88 PACKING DENSITY: (WHEN APPLICABLE) Kg/m ³ N/A	VAPOR PRESSURE: (mm Hg AT 20°C) <0.0001 VAPOR DENSITY: (AIR = 1) 10+ SOLUBILITY IN H ₂ O: (% BY VOL) NIL % VOLATILES BY VOL.: NIL EVAPORATION RATE: (ETHYL ETHER = 1) 1000X SLOWER	pH INFORMATION: pH 7.5 @ _____ g/l H ₂ O OCTANOL/WATER PARTITION COEFFICIENT: N.D. APPEARANCE AMBER FLUID AND ODOR: LITTLE ODOR ODOR THRESHOLD (ppm) N.D.

SECTION 4 FIRE AND EXPLOSION DATA (CONT. ON PAGE 2)		
FLASH POINT: 425 MINIMUM COC °F. 219 MINIMUM COC °C		AUTOIGNITION TEMPERATURE: 725 ESTIMATED °F. 385 ESTIMATED °C
NFPA CLASSIFICATION	HAZARD RATING	FLAMMABLE LIMITS IN AIR
HEALTH 0 FIRE 1 REACTIVITY 0	LEAST 0 SLIGHT 1 MODERATE 2 HIGH 3 EXTREME 4	LOWER EXPLOSIVE LEVEL (LEL) NOT DETERMINED % VOL UPPER EXPLOSIVE LEVEL (UEL) NOT DETERMINED % VOL

FIRE AND EXPLOSION HAZARDS
CAN BE MADE TO BURN (FLASH POINT GREATER THAN 230°F).

SUN CODE

R00000166255

MATERIAL SAFETY DATA SHEET

PAGE 2

SUN CODE

1000016625

EXTINGUISHING MEDIA

WATER FOG. CHEMICAL FOAM. DRY CHEMICAL POWDER.
CARBON DIOXIDE.

SPECIAL FIRE FIGHTING INSTRUCTIONS

WEAR SELF-CONTAINED BREATHING APPARATUS WHEN FIRE
FIGHTING IN CONFINED SPACE.

SECTION 5 HEALTH HAZARD INFORMATION

EXPOSURE LIMITS

8HR. TIME WEIGHTED PERMISSIBLE EXPOSURE 5.0 MG/M3 . SUN RECOMMENDATION.

ROUTES OF EXPOSURE AND EFFECTS

INHALATION NO ACUTE EFFECTS EXPECTED TO TWICE EXPOSURE LIMIT.

SKIN PRACTICALLY NON-TOXIC IF ABSORBED (LD50 GREATER THAN 2000 MG/KG). MILD IRRITATION WITH PROLONGED OR
REPEATED CONTACT.

EYE CONTACT WITH THE EYE MAY CAUSE MILD IRRITATION.

INGESTION PRACTICALLY NON-TOXIC (LD50 > 15G/KG).

FIRST AID

INHALATION NONE NORMALLY REQUIRED.

SKIN WASH WITH SOAP AND WATER UNTIL NO ODOR REMAINS. WASH CLOTHING BEFORE REUSE.

EYE FLUSH WITH WATER. IF IRRITATION PERSISTS, OBTAIN MEDICAL ASSISTANCE.

INGESTION GIVE LIQUIDS AND INDUCE VOMITING UNLESS VICTIM IS UNCONSCIOUS. OBTAIN MEDICAL ASSISTANCE. SMALL
AMOUNTS WHICH ACCIDENTALLY ENTER MOUTH SHOULD BE RINSED OUT UNTIL TASTE OF IT IS GONE.

SECTION 6 REACTIVITY DATA (CONT. ON PAGE 3)

STABILITY	INCOMPATIBLE MATERIALS	HAZARDOUS DECOMPOSITION PRODUCTS
STABLE.	STRONG OXIDIZERS.	CARBON MONOXIDE AND ASPHYXIANTS

ORIGINAL
(Red)

MATERIAL SAFETY DATA SHEET

(ARCO)

PAGE 3

SUN CODE

000001642

POLYMERIZATION

POLYMERIZATION WILL NOT OCCUR.

SECTION 7 PROTECTION INFORMATION

VENTILATION

VENTILATE AS NEEDED TO COMPLY WITH EXPOSURE LIMIT.

PERSONAL PROTECTIVE EQUIPMENT

EYE SPLASH PROOF CHEMICAL GOGGLES

GLOVES IMPERVIOUS GLOVES RECOMMENDED WHEN PROLONGED SKIN CONTACT CANNOT BE AVOIDED.

RESPIRATOR CONCENTRATION-IN-AIR DETERMINES PROTECTION NEEDED. USE ONLY NIOSH CERTIFIED RESPIRATORY PROTECTION. RESPIRATORY PROTECTION USUALLY NOT NEEDED UNLESS PRODUCT IS HEATED OR MISTED.

OTHER IF CONTACT IS UNAVOIDABLE, WEAR IMPERVIOUS PROTECTIVE GEAR. LAUNDER SOILED CLOTHES.

SECTION 8 DISPOSAL PROCEDURES

AQUATIC TOXICITY

NOT DETERMINED

SPILL, LEAK OR RELEASE

CONTAIN SPILL. ABSORB ON INERT MATERIAL.

WASTE DISPOSAL

FOLLOW FEDERAL, STATE AND LOCAL REGULATIONS. DO NOT FLUSH TO DRAIN/ STORM SEWER. CONTRACT TO AUTHORIZED DISPOSAL SERVICE.

SECTION 9 SPECIAL PRECAUTIONS

STORAGE AND HANDLING CONDITIONS

NFPA CLASS IIIB STORAGE. AVOID PROLONGED BREATHING OF MIST OR VAPOR. AVOID PROLONGED OR REPEATED CONTACT WITH SKIN. WASH THOROUGHLY AFTER HANDLING.

SECTION 10 PRECAUTIONARY LABEL (IF APPLICABLE)

CAUTION! PROLONGED OR REPEATED CONTACT WITH USED MOTOR OIL MAY BE HARMFUL TO SKIN AND COULD CAUSE SKIN CANCER. PROMPTLY WASH AFFECTED AREA WITH SOAP AND WATER.

ORIGINAL
(Red)

MATERIAL SAFETY DATA SHEET

SUNSun Refining and
Marketing Company

(ARCO)

THIS PRODUCT SAFETY INFORMATION IS PROVIDED
PERIODICALLY TO ASSIST OUR CUSTOMERS IN ASSESSING
COMPLIANCE WITH HEALTH/SAFETY/ENVIRONMENTAL
REGULATIONS. PLEASE FORWARD THIS TO YOUR MANAGER
OF SAFETY AND HEALTH. THIS FORM REPLACES OUR
PREVIOUS FORM DATED 10/26/85

SUN CODE

R0000016415

PRINTED: 85/12/07

SECTION 1 IDENTIFICATION

NAME AR10327 SUPREME 20W-20	SYNONYMS	REV. DATE 11/22/85
CAS REGISTRY NO.	CAS NAME NO CLASSIFICATION - MIXTURE	
ATLANTIC RICHFIELD COMPANY ATTENTION - MR. DAVID F. ENGEL P. O. BOX 353 BLDG. 8 NEWTOWN SQ. PA 19073		CHEMICAL FAMILY BLEND SUN REFINING AND MARKETING COMPANY TEN PENN CENTER 1801 MARKET STREET PHILADELPHIA PA 19103
		INFORMATION SUPPLIED BY AND PHONE RAMONA PANSON (215) 293-6323

SECTION 2 INGREDIENTS

MATERIAL(S)
SEVERELY SOLVENT REFINED HEAVY PARAFFINIC DISTILLATE (PETROLEUM) CAS# 64741-88-4; ZINC DIALKYL DITHIO
PHOSPHATE CAS# 68457-79-4; MAGNESIUM SULFONATE CAS# 61789-87-5; SODIUM SULFONATE CAS# 68608-26-4; CALCIUM
PHENATE; POLYBUTYLENEAMIDE; POLYALKENYL SUCCINIC ANHYDRIDE; METHACRYLATE COPOLYMER. PRODUCT TYPICALLY
CONTAINS 0.08% CALCIUM; 0.11% MAGNESIUM; 0.07% NITROGEN; 0.12% PHOSPHORUS; 0.13% ZINC.

SECTION 3 PHYSICAL DATA

BOILING POINT: 760 mm Hg HIGH WITH °F. WIDE RANGE °C	VAPOR PRESSURE: (mm Hg AT 20°C) <0.0001	pH INFORMATION: pH 7.5 @ _____ g/l H ₂ O
MELTING POINT: N/A °F. N/A °C	VAPOR DENSITY: (AIR = 1) 104	OCTANOL/WATER PARTITION COEFFICIENT: N.D.
SPECIFIC GRAVITY: (H ₂ O = 1) 0.88	SOLUBILITY IN H ₂ O: (% BY VOL.) NIL	APPEARANCE AMBER FLUID
PACKING DENSITY: (WHEN APPLICABLE) Kg/m ³ N/A	% VOLATILES BY VOL.: NIL	AND ODOR: LITTLE ODOR
	EVAPORATION RATE: (ETHYL ETHER = 1) 1000X SLOWER	ODOR THRESHOLD (ppm) N.D.

SECTION 4 FIRE AND EXPLOSION DATA (CONT. ON PAGE 2)

FLASH POINT: 400 MINIMUM CDC °F. 204 MINIMUM CDC °C	AUTOIGNITION TEMPERATURE: 670 ESTIMATED °F. 356 ESTIMATED °C	
NFPA CLASSIFICATION HEALTH 0 FIRE 1 REACTIVITY 0	HAZARD RATING LEAST 0 SLIGHT 1 MODERATE 2 HIGH 3 EXTREME 4	FLAMMABLE LIMITS IN AIR LOWER EXPLOSIVE LEVEL (LEL) NOT DETERMINED % VOL UPPER EXPLOSIVE LEVEL (UEL) NOT DETERMINED % VOL
FIRE AND EXPLOSION HAZARDS		

CAN BE MADE TO BURN (FLASH POINT GREATER THAN 200°F).

SUN CODE

R00000164155

(ARCO)

EXTINGUISHING MEDIA

WATER FOG. CHEMICAL FOAM. DRY CHEMICAL POWDER.
CARBON DIOXIDE.

SPECIAL FIRE FIGHTING INSTRUCTIONS

WEAR SELF-CONTAINED BREATHING APPARATUS WHEN FIRE
FIGHTING IN CONFINED SPACE.

0000164155

SECTION 5 HEALTH HAZARD INFORMATION

EXPOSURE LIMITS

9 HR. TIME WEIGHTED PERMISSIBLE EXPOSURE 5.0 MG/M3 . SUN RECOMMENDATION.

ROUTES OF EXPOSURE AND EFFECTS

INHALATION NO ACUTE EFFECTS EXPECTED TO TWICE EXPOSURE LIMIT.

SKIN PRACTICALLY NON-TOXIC IF ABSORBED (LD50 GREATER THAN 2000 MG/KG). MODERATE IRRITATION WITH PROLONGED OR
REPEATED CONTACT.

EYE CONTACT WITH THE EYE MAY CAUSE MILD IRRITATION.

INGESTION PRACTICALLY NON-TOXIC (LD50 > 15G/KG).

FIRST AID

INHALATION MOVE PERSON TO FRESH AIR.

SKIN WASH WITH SOAP AND WATER UNTIL NO ODOR REMAINS. WASH CLOTHING BEFORE REUSE.

EYE FLUSH WITH WATER. IF IRRITATION PERSISTS, OBTAIN MEDICAL ASSISTANCE.

INGESTION GIVE LIQUIDS AND INDUCE VOMITING UNLESS VICTIM IS UNCONSCIOUS. OBTAIN MEDICAL ASSISTANCE. SMALL
AMOUNTS WHICH ACCIDENTALLY ENTER MOUTH SHOULD BE RINSED OUT UNTIL TASTE OF IT IS GONE.

SECTION 6 REACTIVITY DATA (CONT. ON PAGE 3)

STABILITY

STABLE.

INCOMPATIBLE MATERIALS

STRONG OXIDIZERS.

HAZARDOUS DECOMPOSITION PRODUCTS

CARBON MONOXIDE AND ASPHYXIANTS

POLYMERIZATION

POLYMERIZATION WILL NOT OCCUR.

SECTION 7 PROTECTION INFORMATION

VENTILATION

VENTILATE AS NEEDED TO COMPLY WITH EXPOSURE LIMIT.

PERSONAL PROTECTIVE EQUIPMENT

EYE SPLASH PROOF CHEMICAL GOGGLES

GLOVES IMPERVIOUS GLOVES RECOMMENDED WHEN PROLONGED SKIN CONTACT CANNOT BE AVOIDED.

RESPIRATOR CONCENTRATION-IN-AIR DETERMINES PROTECTION NEEDED. USE ONLY NIOSH CERTIFIED RESPIRATORY PROTECTION.

OTHER IF CONTACT IS UNAVOIDABLE, WEAR IMPERVIOUS PROTECTIVE GEAR. LAUNDRY SOILED CLOTHES.

SECTION 8 DISPOSAL PROCEDURES

AQUATIC TOXICITY

NOT DETERMINED

SPILL, LEAK OR RELEASE

CONTAIN SPILL. ABSORB ON INERT MATERIAL.

WASTE DISPOSAL

FOLLOW FEDERAL, STATE AND LOCAL REGULATIONS. DO NOT FLUSH TO DRAIN/ STORM SEWER. CONTRACT TO AUTHORIZED DISPOSAL SERVICE.

SECTION 9 SPECIAL PRECAUTIONS

STORAGE AND HANDLING CONDITIONS

NEPA CLASS IIIB STORAGE. AVOID PROLONGED BREATHING OF MIST OR VAPOR. AVOID PROLONGED OR REPEATED CONTACT WITH SKIN. WASH THOROUGHLY AFTER HANDLING.

SECTION 10 PRECAUTIONARY LABEL (IF APPLICABLE)

CAUTION: PROLONGED OR REPEATED CONTACT WITH USED MOTOR OIL MAY BE HARMFUL TO SKIN AND COULD CAUSE SKIN CANCER. PROMPTLY WASH AFFECTED AREA WITH SOAP AND WATER.

MATERIAL SAFETY DATA SHEET

PAGE 1

ORIGINAL
(Reg)
SUN

Sun Refining and
Marketing Company

(ARCO)

THIS PRODUCT SAFETY INFORMATION IS PROVIDED PERIODICALLY TO ASSIST OUR CUSTOMERS IN ASSESSING COMPLIANCE WITH HEALTH/SAFETY/ENVIRONMENTAL REGULATIONS. PLEASE FORWARD THIS TO YOUR MANAGER OF SAFETY AND HEALTH. THIS FORM REPLACES OUR PREVIOUS FORM DATED 01/26/83

SUN CODE

R0000037285

PRINTED: 85/05/11

SECTION 1 IDENTIFICATION

NAME AR10224 FL S3 PLUS 10TBN SYNONYMS

CAS REGISTRY NO.

CAS NAME NO CLASSIFICATION - MIXTURE

REV. DATE 09/23/83

ATLANTIC RICHFIELD COMPANY
ATTENTION - MR. JOHN GALLAGHER
P O BOX 60585
PHILADELPHIA PA 19145

CHEMICAL FAMILY BLEND

SUN REFINING
AND MARKETING COMPANY
TEN PENN CENTER 1801 MARKET STREET
PHILADELPHIA PA 19103

INFORMATION SUPPLIED BY
AND PHONE RAMONA PANSON
(215) 293-6323

SECTION 2 INGREDIENTS

MATERIAL(S)
SOLVENT REFINED HEAVY PARAFFINIC OIL, CAS NO. 64741884; DETERGENT DISPERSANT ADDITIVE KNOWN TO CONTAIN CALCIUM, MAGNESIUM, ZINC AND NITROGEN; TRACE POUR DEPRESSANT. PRODUCT TYPICALLY CONTAINS 0.13% ZINC AND 0.12% PHOSPHORUS.

SECTION 3 PHYSICAL DATA

BOILING POINT: 760 mm Hg HIGH WITH °F. WIDE RANGE °C

MELTING POINT: N/A °F. °C

SPECIFIC GRAVITY: (H₂O=1) 0.88

PACKING DENSITY: (WHEN APPLICABLE) Kg/m³ N/A

VAPOR PRESSURE: (mm Hg AT 20°C) 111
VAPOR DENSITY: (AIR = 1) 1.24

SOLUBILITY IN H₂O: (% BY VOL.) NIL

% VOLATILES BY VOL.: NIL

EVAPORATION RATE: (ETHYL ETHER = 1) 1000X SLOWER

pH INFORMATION: pH 7.0 @ 25 °C

OCTANOL/WATER
PARTITION COEFFICIENT: N.D.

APPEARANCE DARK FLUID.
AND ODOR: ENGINE OIL ODOR.
ODOR THRESHOLD (ppm) N.D.

SECTION 4 FIRE AND EXPLOSION DATA (CONT. ON PAGE 2)

FLASH POINT: 430 MINIMUM COC °F. 221 MINIMUM COC °C

AUTOIGNITION TEMPERATURE: 725 ESTIMATED °F. 385 ESTIMATED °C

NFPA CLASSIFICATION

HEALTH 0 FIRE 1 REACTIVITY 0

SPECIFIC HAZARD

HAZARD RATING

LEAST 0 SLIGHT 1
MODERATE 2 HIGH 3 EXTREME 4

FLAMMABLE LIMITS IN AIR

LOWER EXPLOSIVE LEVEL (LEL) NOT DETERMINED % VOL

UPPER EXPLOSIVE LEVEL (UEL) NOT DETERMINED % VOL

FIRE AND EXPLOSION HAZARDS

CAN BE MADE TO BURN (FLASH POINT >200°F).

SUN CODE
R00000372855

ORIGINAL
(Red)

MATERIAL SAFETY DATA SHEET

(ARCO)

PAGE 2

SUN CODE

000003728

EXTINGUISHING MEDIA
WATER FOG. CHEMICAL FOAM. DRY CHEMICAL POWDER.
CARBON DIOXIDE.

SPECIAL FIRE FIGHTING INSTRUCTIONS
WEAR SELF-CONTAINED BREATHING APPARATUS WHEN FIRE
FIGHTING IN CONFINED SPACE.

SECTION 5 HEALTH HAZARD INFORMATION

EXPOSURE LIMITS
8HR. TIME WEIGHTED PERMISSIBLE EXPOSURE 5.0 MG/M3 .

ROUTES OF EXPOSURE AND EFFECTS
INHALATION NO ACUTE EFFECTS EXPECTED TO TWICE EXPOSURE LIMIT.

SKIN MILD IRRITATION WITH PROLONGED OR REPEATED CONTACT.

EYE CONTACT WITH THE EYE MAY CAUSE MILD IRRITATION. NO PERMANENT DAMAGE EXPECTED.

INGESTION SLIGHTLY TOXIC (LD50 5 TO 15 G/KG).

FIRST AID
INHALATION MOVE PERSON TO FRESH AIR.

SKIN WASH WITH SOAP AND WATER UNTIL NO ODOR REMAINS. WASH CLOTHING BEFORE REUSE.

EYE FLUSH WITH WATER.

INGESTION GIVE LIQUIDS AND INDUCE VOMITING UNLESS VICTIM IS UNCONSCIOUS. OBTAIN MEDICAL ASSISTANCE. SMALL AMOUNTS WHICH ACCIDENTALLY ENTER MOUTH SHOULD BE RINSED OUT UNTIL TASTE OF IT IS GONE.

SECTION 6 REACTIVITY DATA (CONT. ON PAGE 3)

STABILITY	INCOMPATIBLE MATERIALS	HAZARDOUS DECOMPOSITION PRODUCTS
STABLE.	INCOMPATIBLE WITH STRONG OXIDIZERS	CARBON MONOXIDE AND ASPHYXIANTS

MATERIAL SAFETY DATA SHEET

PAGE 3

SUN CODE

RO00003728

POLYMERIZATION
POLYMERIZATION WILL NOT OCCUR.

SECTION 7 PROTECTION INFORMATION

VENTILATION

VENTILATE AS NEEDED TO COMPLY WITH EXPOSURE LIMIT.

PERSONAL PROTECTIVE EQUIPMENT

EYE SPLASH PROOF CHEMICAL GOGGLES RECOMMENDED

GLOVES IMPERVIOUS GLOVES RECOMMENDED WHEN PROLONGED SKIN CONTACT CANNOT BE AVOIDED.

RESPIRATOR CONCENTRATION-IN-AIR DETERMINES PROTECTION NEEDED. USE ONLY NIOSH CERTIFIED RESPIRATORY PROTECTION.

OTHER NONE MATERIALLY NEEDED.

SECTION 8 DISPOSAL PROCEDURES

AQUATIC TOXICITY

NOT DETERMINED

SPILL, LEAK OR RELEASE

CONTAIN SPILL. ABSORB ON INERT MATERIAL.

WASTE DISPOSAL

FOLLOW FEDERAL, STATE AND LOCAL REGULATIONS.

SECTION 9 SPECIAL PRECAUTIONS

STORAGE AND HANDLING CONDITIONS

NFPA CLASS IIIb STORAGE. WASH THOROUGHLY AFTER HANDLING.

SECTION 10 PRECAUTIONARY LABEL (IF APPLICABLE)

CAUTION! PROLONGED OR REPEATED CONTACT WITH USED MOTOR OIL MAY BE HARMFUL TO SKIN AND COULD CAUSE SKIN CANCER. PROMPTLY WASH AFFECTED AREA WITH SOAP AND WATER.

MATERIAL SAFETY DATA SHEET

PAGE 1



Sun Refining and Marketing Company

(ARCO)

THIS PRODUCT SAFETY INFORMATION IS PROVIDED PERIODICALLY TO ASSIST OUR CUSTOMERS IN ASSESSING COMPLIANCE WITH HEALTH/SAFETY/ENVIRONMENTAL REGULATIONS. PLEASE FORWARD THIS TO YOUR MANAGER OF SAFETY AND HEALTH. THIS FORM REPLACES OUR PREVIOUS FORM DATED 10/27/83

SUN CODE

R00000371255

PRINTED: 84/12/29

SECTION 1 IDENTIFICATION

NAME AR10036 ICE MACHINE 350 SYNONYMS

S REGISTRY NO.

CAS NAME

NO CLASSIFICATION - MIXTURE

REV. DATE

03/02/82

ATLANTIC RICHFIELD COMPANY
ATTENTION - MR. JOHN GALLAGHER
P O BOX 60585
PHILADELPHIA PA 19145

CHEMICAL FAMILY

BLEND PETROLEUM LUBRICANT.

SUN REFINING

AND MARKETING COMPANY

TEN PENN CENTER 1801 MARKET STREET
PHILADELPHIA PA 19103

INFORMATION SUPPLIED BY
AND PHONE

RAMONA PANSON
(215) 293-6323

SECTION 2 INGREDIENTS

MATERIAL(S)

REFINED PARAFFINIC OILS PLUS POUR DEPRESSANT AND DEFOAMER ADDITIVES

SECTION 3 PHYSICAL DATA

FLASH POINT: 760 mm Hg HIGH WITH °F. WIDE RANGE °C

BOILING POINT: N/A °F. °C

DENSITY GRAVITY: (H₂O=1) 0.83

RELATIVE DENSITY: (WATER=1) N/A

VAPOR PRESSURE: (mm Hg AT 20°C) NIL

VAPOR DENSITY: (AIR = 1) 1

SOLUBILITY IN H₂O: (% BY VOL.) NIL

% VOLATILES BY VOL.: NIL

EVAPORATION RATE: (ETHYL ETHER = 1) 1000X SLOWER

pH INFORMATION: pH N/A @ 20°C

OCTANOL/WATER PARTITION COEFFICIENT: N.D.

APPEARANCE: LIGHT AMBER FLUID.
AND ODOR: LITTLE ODOR.
ODOR THRESHOLD (ppm) N.D.

SECTION 4 FIRE AND EXPLOSION DATA (CONT. ON PAGE 2)

FLASH POINT: 625 MINIMUM COC °F. 213 MINIMUM COC °C

AUTOIGNITION TEMPERATURE: 700 ESTIMATED °F. 371 ESTIMATED °C.

NFPA CLASSIFICATION

LETHALITY 0 FIRE 1 REACTIVITY 0

HAZARD

HAZARD RATING

LEAST 0 SLIGHT 1
MODERATE 2 HIGH 3 EXTREME 4

FLAMMABLE LIMITS IN AIR

LOWER EXPLOSIVE LEVEL (LEL) NOT DETERMINED % VOL.

UPPER EXPLOSIVE LEVEL (UEL) NOT DETERMINED % VOL.

FIRE AND EXPLOSION HAZARDS

DO NOT BE MADE TO BURN (FLASH POINT >200°F).

SUN CODE

R00000371255

ORIGINAL
(Red)

MATERIAL SAFETY DATA SHEET

(ARCO)

PAGE 2

SUN CODE

000371255

EXTINGUISHING MEDIA
WATER FOG. CHEMICAL FOAM. DRY CHEMICAL POWDER.
CARBON DIOXIDE.

SPECIAL FIRE FIGHTING INSTRUCTIONS
WEAR SELF-CONTAINED BREATHING APPARATUS WHEN FIRE
FIGHTING IN CONFINED SPACE.

SECTION 5 HEALTH HAZARD INFORMATION

EXPOSURE LIMITS
HR. TIME WEIGHTED PERMISSIBLE EXPOSURE 5.0 MG/M3 .

ROUTES OF EXPOSURE AND EFFECTS
INHALATION NO ACUTE EFFECTS EXPECTED TO TWICE EXPOSURE LIMIT.

SKIN PRACTICALLY NON-TOXIC IF ABSORBED (LD50 GREATER THAN 2000 MG/KG). NO SKIN EFFECTS EXPECTED

EYE CONTACT WITH THE EYE MAY CAUSE TEMPORARY SMARTING. NO PERMANENT DAMAGE EXPECTED.

INGESTION PRACTICALLY NON-TOXIC (LD50 > 15G/KG). LD50 IN RATS IS: 30 GRAMS PER KILOGRAM OF RAT BODY
WEIGHT.

FIRST AID
INHALATION NONE NORMALLY REQUIRED.

SKIN WASH WITH SOAP AND WATER UNTIL NO ODOR REMAINS.

EYE FLUSH WITH WATER.

INGESTION GIVE LIQUIDS AND INDUCE VOMITING UNLESS VICTIM IS UNCONSCIOUS. OBTAIN MEDICAL ASSISTANCE.

SECTION 6 REACTIVITY DATA (CONT. ON PAGE 3)

STABILITY	INCOMPATIBLE MATERIALS	HAZARDOUS DECOMPOSITION PRODUCTS
TABLE.	STRONG OXIDIZERS.	CARBON MONOXIDE AND ASPHYXIANTS

ORIGINAL (Reg)
MATERIAL SAFETY DATA SHEET

PAGE 3

SUN CODE

0000371255

(ABCO)

POLYMERIZATION

POLYMERIZATION WILL NOT OCCUR.

SECTION 7 PROTECTION INFORMATION

VENTILATION

ONE NORMALLY NEEDED.

PERSONAL PROTECTIVE EQUIPMENT

E. PRODUCT MINIMALLY IRRITATING TO EYES LOCAL SAFETY POLICY DECISION.

GLOVES PRODUCT MINIMALLY IRRITATING TO SKIN LOCAL SAFETY POLICY DECISION.

RESPIRATOR RESPIRATORY PROTECTION USUALLY NOT NEEDED UNLESS PRODUCT IS HEATED OR MISTED.

HEAR NONE NORMALLY NEEDED.

SECTION 8 DISPOSAL PROCEDURES

AQUATIC TOXICITY

NOT DETERMINED

SPILL, LEAK OR RELEASE

BSOR3 ON INERT MATERIAL.

WASTE DISPOSAL

FOLLOW FEDERAL, STATE AND LOCAL REGULATIONS.

SECTION 9 SPECIAL PRECAUTIONS

STORAGE AND HANDLING CONDITIONS

FPA CLASS IIII9 STORAGE.

SECTION 10 PRECAUTIONARY LABEL (IF APPLICABLE)

0 ADDITIONAL PRECAUTIONS AND LABELS

(ARCO)

THIS PRODUCT SAFETY INFORMATION IS PROVIDED PERIODICALLY TO ASSIST OUR CUSTOMERS IN ASSESSING COMPLIANCE WITH HEALTH/SAFETY/ENVIRONMENTAL REGULATIONS. PLEASE FORWARD THIS TO YOUR MANAGER OF SAFETY AND HEALTH. THIS FORM REPLACES OUR PREVIOUS FORM DATED 06/29/84

SUN CO

R000001 05

LOCATION 10027 TUFFLO 750		SYNONYMS		REV. DATE 08/21/84
CAS REGISTRY NO. 64742-34-3		CAS NAME CHEMICALLY NEUTRALIZED HEAVY NAPHTHENIC DISTILLATE		
ATLANTIC RICHFIELD COMPANY ATTENTION - MR. DAVID F. ENGEL P. O. BOX 353 ALDG. 8 NEWTOWN SO. PA 19073		CHEMICAL FAMILY PETROLEUM OIL		
		SUN REFINING AND MARKETING COMPANY TEN PENN CENTER 1801 MARKET STREET PHILADELPHIA PA 19103		
		INFORMATION SUPPLIED BY AND PHONE JONATHAN M. HAAS (215) 293-6321		
SECTION 2 INGREDIENTS				
MATERIAL(S) A COMPLEX COMBINATION OF HYDROCARBONS PRODUCED BY A TREATING PROCESS TO REMOVE ACIDIC MATERIALS. IT CONSISTS OF HYDROCARBONS HAVING CARBON NUMBERS PREDOMINANTLY IN THE RANGE OF C20 THROUGH C50 AND PRODUCES A FINISHED OIL WITH A VISCOSITY OF AT LEAST 100 SUS AT 100F. IT CONTAINS RELATIVELY FEW NORMAL PARAFFINS.				
SECTION 3 PHYSICAL DATA				
BOILING POINT: 760 mm Hg <u>WIDE RANGE °F. WIDE RANGE °C</u>		VAPOR PRESSURE: (mm Hg AT 20°C) <u><0.0001</u>		pH INFORMATION: pH <u>N/A</u> @ _____ °F
MELTING POINT: <u>N/A</u> °F. <u>N/A</u> °C		VAPOR DENSITY: (AIR = 1) <u>12+</u>		OCTANOL/WATER PARTITION COEFFICIENT: <u>N.D.</u>
SPECIFIC GRAVITY: (H ₂ O=1) <u>0.93</u>		SOLUBILITY IN H ₂ O: (% BY VOL.) <u>NIL</u>		APPEARANCE <u>CLAR. AMBER FLUID</u>
PACKING DENSITY: (WHEN APPLICABLE) Kg/m ³ <u>N/A</u>		% VOLATILES BY VOL.: <u>NIL</u>		AND ODOR: <u>LITTLE ODDOR</u>
		EVAPORATION RATE: (ETHYL ETHER = 1) <u>1000 X SLOWER</u>		ODOR THRESHOLD (ppm) <u>N.D.</u>
SECTION 4 FIRE AND EXPLOSION DATA (CONT. ON PAGE 2)				
FLASH POINT: <u>360 MINIMUM COC</u> °F. <u>183 MINIMUM COC</u> °C		AUTOIGNITION TEMPERATURE: <u>695 ESTIMATED</u> °F. <u>368 ESTIMATED</u> °C		
NFPA CLASSIFICATION		HAZARD RATING		FLAMMABLE LIMITS IN AIR
HEALTH <u>0</u>	FIRE <u>1</u>	REACTIVITY <u>0</u>	LEAST 0 SLIGHT 1	LOWER EXPLOSIVE LEVEL (LEL) <u>NOT DETERMINED</u> %
SPECIFIC HAZARD			MODERATE 2 HIGH 3 EXTREME 4	UPPER EXPLOSIVE LEVEL (UEL) <u>NOT DETERMINED</u> %
FIRE AND EXPLOSION HAZARDS				
CAN BE MADE TO BURN (FLASH POINT GREATER THAN 200F).				

SUN CO
R0000010645

MATERIAL SAFETY DATA SHEET

PAGE 2

SUN CODE

000010645

EXTINGUISHING MEDIA

WATER FOR. CHEMICAL FOAM. DRY CHEMICAL POWDER.
CARBON DIOXIDE.

SPECIAL FIRE FIGHTING INSTRUCTIONS

WEAR SELF-CONTAINED BREATHING APPARATUS WHEN FIRE
FIGHTING IN CONFINED SPACE.

SECTION 5 HEALTH HAZARD INFORMATION

EXPOSURE LIMITS

TLV - TIME WEIGHTED PERMISSIBLE EXPOSURE 0.2 MG/M³.

ROUTES OF EXPOSURE AND EFFECTS

INHALATION EXCESSIVE EXPOSURES MAY CAUSE DISCOMFORT. DISAGREEABLE ODOR. NAUSEA.

SKIN PRACTICALLY NON-TOXIC IF ABSORBED (1050 GREATER THAN 2000 MG/KG). MAY PRODUCE SKIN TUMORS WITH
PROLONGED AND REPEATED CONTACT. MILD IRRITATION WITH PROLONGED AND REPEATED CONTACT. DRAIZE SKIN
IRRITATION SCORE IS: 1.66 OUT OF 8.0

EYE CONTACT WITH THE EYE MAY CAUSE TEMPORARY SMARTING. NO PERMANENT DAMAGE EXPECTED. IRRITATION SCORE 0.8
0-4 0-0 0-0 0-0 OUT OF 10-0 AT 1 6 24 48 72 (HOURS)

INGESTION PRACTICALLY NON-TOXIC (1050 > 1500 MG/KG).

FIRST AID

INHALATION NONE NORMALLY REQUIRED.

SKIN WASH WITH SOAP AND WATER UNTIL NO ODOR REMAINS. WASH CLOTHING BEFORE REUSE. DESTROY CONTAMINATED
SHOES.

EYE FLUSH WITH WATER.

INGESTION GIVE EMETIC AND INDUCE VOMITING UNLESS VICTIM IS UNCONSCIOUS. OBTAIN MEDICAL ASSISTANCE. SMALL
AMOUNTS WHICH ACCIDENTALLY ENTER MOUTH SHOULD BE RINSED OUT UNTIL TASTE OF IT IS GONE.

SECTION 6 REACTIVITY DATA (CONT. ON PAGE 3)

STABILITY

STABLE.

INCOMPATIBLE MATERIALS

STRONG OXIDIZERS.

HAZARDOUS DECOMPOSITION PRODUCTS

CARBON MONOXIDE AND ASPHYXIANTS.

ORIGINAL
(if any)

MATERIAL SAFETY DATA SHEET

(ARCO)

PAGE 3

SUN CODE

000001 0645

POLYMERIZATION

POLYMERIZATION WILL NOT OCCUR.

SECTION 7 PROTECTION INFORMATION

VENTILATION

VENTILATE AS NEEDED TO COMPLY WITH EXPOSURE LIMIT.

PERSONAL PROTECTIVE EQUIPMENT

EYE PROTECTIVE EQUIPMENT IRRITATING TO EYES. LOCAL SAFETY POLICY DECISION.

GLOVES IMPERVIOUS GLOVES RECOMMENDED TO PROTECT AGAINST CONTACT WITH PRODUCT.

RESPIRATOR CONCENTRATION-IN-AIR DETERMINES PROTECTION NEEDED. USE ONLY NIOSH CERTIFIED RESPIRATORY PROTECTION.

OTHER AVOID ALL SKIN CONTACT. IF CONTACT IS UNAVOIDABLE, WEAR IMPERVIOUS PROTECTIVE GEAR. LAUNTER SOILED CLOTHES.

SECTION 8 DISPOSAL PROCEDURES

AQUATIC TOXICITY

NOT DETERMINED

SPILL, LEAK OR RELEASE

CONTAIN SPILL. ABSORB ON INERT MATERIAL.

WASTE DISPOSAL

WILL BE RECYCLED. STATE AND LOCAL REGULATIONS. NOT A RCRA HAZARDOUS WASTE IF UNCONTAMINATED. INCINERATE. CONTRACT TO AUTHORIZED DISPOSAL SERVICE.

SECTION 9 SPECIAL PRECAUTIONS

STORAGE AND HANDLING CONDITIONS

NEPA CLASS 111 STORAGE. AVOID PROLONGED BREATHING OF MIST OR VAPOR. AVOID CONTACT WITH THIS MATERIAL. WASH THOROUGHLY AFTER HANDLING.

SECTION 10 PRECAUTIONARY LABEL (IF APPLICABLE)

WARNING: CONTAINS UNTREATED NAPHTHENE OIL WHICH IS CLASSIFIED AS CARCINOGENIC BY THE INTERNATIONAL AGENCY FOR RESEARCH ON CANCER. UNTREATED NAPHTHENE OILS HAVE PRODUCED SKIN CANCER IN LABORATORY ANIMAL EXPERIMENTS. MINIMIZE SKIN CONTACT AND INHALATION OF MIST. IF CONTACT IS UNAVOIDABLE, WEAR APPROPRIATE OIL-IMPERVIOUS CLOTHING. IN CASE OF SKIN CONTACT, PROMPTLY WASH WITH SOAP AND WATER. CLOTHING SOAKED THROUGH WITH THIS OIL SHOULD BE REMOVED AND LAUNDERED BEFORE REUSE. AVERAGE EXPOSURE TO AIRBORNE MIST FOR AN 8-HOUR WORKDAY SHOULD NOT EXCEED 0.2 MILLIGRAMS PER CUBIC METER OF AIR.

SUN Sun Refining and Marketing Company

(ARCO)

THIS PRODUCT SAFETY INFORMATION IS PROVIDED PERIODICALLY TO ASSIST OUR CUSTOMERS IN ASSESSING COMPLIANCE WITH HEALTH/SAFETY/ENVIRONMENTAL REGULATIONS. PLEASE FORWARD THIS TO YOUR MANAGER OF SAFETY AND HEALTH. THIS IS THE FIRST FORM PRINTED FOR YOU FOR THIS PRODUCT

SUN CODE

R00000033400

PRINTED: 85/05/11

SECTION 1 IDENTIFICATION

NAME SN 150 BS	SYNONYMS	REV. DATE 07/15/83
CAS REGISTRY NO 847-1384	CAS NAME SOLVENT REFINED HEAVY PARAFFINIC DISTILLATE	
ATLANTIC RICHFIELD COMPANY ATTENTION - MR. JOHN GALLAGHER P O BOX 60585 PHILADELPHIA PA 19145		CHEMICAL FAMILY PETROLEUM HYDROCARBON SUN REFINING AND MARKETING COMPANY TEN PENN CENTER 1801 MARKET STREET PHILADELPHIA PA 19103 INFORMATION SUPPLIED BY RAMONA PANSON AND PHONE (215) 293-6323

SECTION 2 INGREDIENTS

SOLVENT REFINED, HYDROTREATED HEAVY PARAFFINIC DISTILLATE, 100%

SECTION 3 PHYSICAL DATA

BOILING POINT: 760 mm Hg HIGH WITH WIDE RANGE °C	VAPOR PRESSURE: (mm Hg AT 20°C) BELOW 0.001	pH INFORMATION: pH N/A @ _____ g/l H ₂ O
MELTING POINT: N/A °F _____ °C	VAPOR DENSITY: (AIR = 1) 2.0	OCTANOL/WATER PARTITION COEFFICIENT: N.D.
SPECIFIC GRAVITY: (H ₂ O = 1) 0.89	SOLUBILITY IN H ₂ O: (% BY VOL.) NIL	APPEARANCE DARK VISCOUS FLUID.
PACKING DENSITY: (WHEN APPLICABLE) Kg/m ³ N/A	% VOLATILES BY VOL.: NIL	AND ODOR: LIITLE ODOR
	EVAPORATION RATE: (ETHYL ETHER = 1) 1000X SLOWER	ODOR THRESHOLD (ppm) N.D.

SECTION 4 FIRE AND EXPLOSION DATA (CONT. ON PAGE 2)

FLASH POINT: 570 MINIMUM COC °F 299 MINIMUM COC °C	AUTOIGNITION TEMPERATURE: 755 ESTIMATED °F 402 ESTIMATED °C
NFPA CLASSIFICATION HEALTH 0 FIRE 1 REACTIVITY 0 SPECIFIC HAZARD	HAZARD RATING LEAST 0 SLIGHT 1 MODERATE 2 HIGH 3 EXTREME 4
FLAMMABLE LIMITS IN AIR LOWER EXPLOSIVE LEVEL (LEL) NOT DETERMINED % VOL. UPPER EXPLOSIVE LEVEL (UEL) NOT DETERMINED % VOL.	

FIRE AND EXPLOSION HAZARDS

CAN BE MADE TO BURN (FLASH POINT >200°F).

SUN CODE
R00000033400

ORIGINAL (copy)

(ARCO)

0000033400

EXTINGUISHING MEDIA
WATER FOG. CHEMICAL FOAM. DRY CHEMICAL POWDER.
CARBON DIOXIDE.

SPECIAL FIRE FIGHTING INSTRUCTIONS
WEAR SELF-CONTAINED BREATHING APPARATUS WHEN FIRE
FIGHTING IN CONFINED SPACE.

SECTION 5 HEALTH HAZARD INFORMATION

EXPOSURE LIMITS

8HR. TIME WEIGHTED PERMISSIBLE EXPOSURE 5.0 MG/M3 .

ROUTES OF EXPOSURE AND EFFECTS

INHALATION NO ACUTE EFFECTS EXPECTED TO TWICE EXPOSURE LIMIT.

SKIN PRACTICALLY NON-TOXIC IF ABSORBED (LD50 GREATER THAN 2000 MG/KG). NO SKIN EFFECTS EXPECTED

EYE CONTACT WITH THE EYE MAY CAUSE MILD IRRITATION.

INGESTION PRACTICALLY NON-TOXIC (LD50 > 15G/KG).

FIRST AID

INHALATION NONE NORMALLY REQUIRED.

SKIN WASH WITH SOAP AND WATER UNTIL NO ODOR REMAINS. WASH CLOTHING BEFORE REUSE.

EYE FLUSH WITH WATER.

INGESTION GIVE LIQUIDS AND INDUCE VOMITING UNLESS VICTIM IS UNCONSCIOUS. OBTAIN MEDICAL ASSISTANCE. SMALL AMOUNTS WHICH ACCIDENTALLY ENTER MOUTH SHOULD BE RINSED OUT UNTIL TASTE OF IT IS GONE.

SECTION 6 REACTIVITY DATA (CONT. ON PAGE 3)

STABILITY

STABLE.

INCOMPATIBLE MATERIALS

STRONG OXIDIZERS.

HAZARDOUS DECOMPOSITION PRODUCTS

CARBON MONOXIDE AND ASPHYXIANTS

MATERIAL SAFETY DATA SHEET

PAGE 3

SUN COI

RO0000033

POLYMERIZATION WILL NOT OCCUR.

SECTION 7 PROTECTION INFORMATION

VENTILATION

VENTILATE AS NEEDED TO COMPLY WITH EXPOSURE LIMIT.

PERSONAL PROTECTIVE EQUIPMENT

EYE PRODUCT MINIMALLY IRRITATING TO EYES LOCAL SAFETY POLICY DECISION.

GLOVES PRODUCT MINIMALLY IRRITATING TO SKIN LOCAL SAFETY POLICY DECISION.

RESPIRATOR CONCENTRATION-IN-AIR DETERMINES PROTECTION NEEDED. USE ONLY NIOSH CERTIFIED RESPIRATORY PROTECTION.

OTHER IF CONTACT IS UNAVOIDABLE, WEAR IMPERVIOUS PROTECTIVE GEAR.

SECTION 8 DISPOSAL PROCEDURES

AQUATIC TOXICITY

NOT DETERMINED

SPILL LEAK OR RELEASE

ABSORB ON INERT MATERIAL.

WASTE DISPOSAL

FOLLOW FEDERAL, STATE AND LOCAL REGULATIONS.

SECTION 9 SPECIAL PRECAUTIONS

STORAGE AND HANDLING CONDITIONS

KEEP AWAY FROM HEAT, SPARKS AND FLAME. NFPA CLASS IIIIB STORAGE.

SECTION 10 PRECAUTIONARY LABEL (IF APPLICABLE)

NO ADDITIONAL PRECAUTIONS AND LABELS

MOBIL MATERIAL SAFETY DATA BULLETIN

MOBIL OIL CORPORATION
ENVIRONMENTAL AFFAIRS AND TOXICOLOGY DEPT.

150 EAST 42ND STREET
NEW YORK, N.Y. 10017 (USA)

***** PRODUCT IDENTIFICATION *****
MOBIL SM NO. 6

SUPPLIER:	HEALTH EMERGENCY TELEPHONE:
MOBIL OIL CORP.	(212)883-4411
CHEMICAL NAMES AND SYNONYMS:	TRANSPORT EMERGENCY TELEPHONE:
PET. HYDROCARBONS AND ADDITIVES	(800)424-9300 (CHEMTREC)
USE OR DESCRIPTION:	OTHER DESIGNATION:
BEARING LUBRICANT	(TRN 610766)

***** TYPICAL CHEMICAL AND PHYSICAL PROPERTIES *****

APPEARANCE:	VISCOSITY: AT 100 F, SUS	AT 40 C, CS
DARK BROWN VISCOUS LIQUID	40000.0	NE
ODOR:	VISCOSITY: AT 210 F, SUS	AT 100 C, CS
MILD	800.0	NE
RELATIVE DENSITY: 15/4 C	SOLUBILITY IN WATER:	PH:
0.931	NEGLECTIBLE	NA
MELTING POINT: F(C)	POUR POINT: F(C)	
NA	50(10)	
BOILING POINT: F(C)	FLASH POINT: F(C) (METHOD)	
>600(316)	>415(213) (ASTM D-92)	
VAPOR PRESSURE:MM HG 20C		
< .1		

NA=NOT APPLICABLE NE=NOT ESTABLISHED D=DECOMPOSES

***** INGREDIENTS *****

	WT PCT	TLV(TWA):	MG/M3	PPM
	(APPROX)			
HAZARDOUS INGREDIENTS:				
NONE				
NON-HAZARDOUS INGREDIENTS:				
REFINED MINERAL OILS	< 35			
PETROLEUM RESIDUALS	> 60			
ADDITIVES AND/OR OTHER INGREDIENTS.	< 5			

NOTE: TLVS SHOWN FOR GUIDANCE ONLY. FOLLOW APPLICABLE REGULATIONS.

INFORMATION GIVEN HEREIN IS OFFERED IN GOOD FAITH AS ACCURATE, BUT WITHOUT GUARANTEE. CONDITIONS OF USE AND SUITABILITY OF THE PRODUCT FOR PARTICULAR USES ARE BEYOND OUR CONTROL; ALL RISKS OF USE OF THE PRODUCT ARE THEREFORE ASSUMED BY THE USER AND WE EXPRESSLY DISCLAIM ALL WARRANTIES OF EVERY KIND AND NATURE, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE IN RESPECT TO THE USE OR SUITABILITY OF THE PRODUCT. NOTHING IS INTENDED AS A RECOMMENDATION FOR USES WHICH INFRINGE VALID PATENTS OR AS EXTENDING LICENSE UNDER VALID PATENTS. APPROPRIATE WARNINGS AND SAFE HANDLING PROCEDURES SHOULD BE PROVIDED TO HANDLERS AND USERS.

ORIGINAL
(Red)
105-2

PAGE 2

HAZARDOUS POLYMERIZATION: CONDITIONS TO AVOID:
WILL NOT OCCUR

***** SPILL OR LEAK PROCEDURE *****

ENVIRONMENTAL IMPACT:

REPORT SPILLS AS REQUIRED TO APPROPRIATE AUTHORITIES. U. S. COAST GUARD REGULATIONS REQUIRE IMMEDIATE REPORTING OF SPILLS THAT COULD REACH ANY WATERWAY INCLUDING INTERMITTENT DRY CREEKS. REPORT SPILL TO COAST GUARD TOLL FREE NUMBER 800-424-8802.

PROCEDURES IF MATERIAL IS RELEASED OR SPILLED:

ABSORB ON FIRE RETARDANT TREATED SAWDUST, DIATOMACEOUS EARTH, ETC. SHOVEL UP AND DISPOSE OF AT AN APPROPRIATE WASTE DISPOSAL FACILITY IN ACCORDANCE WITH CURRENT APPLICABLE LAWS AND REGULATIONS, AND PRODUCT CHARACTERISTICS AT TIME OF DISPOSAL.

WASTE MANAGEMENT:

DILUTE WASTE WITH A SOLVENT, TO REDUCE ITS VISCOSITY, AND DISPOSE BY SUPERVISED INCINERATION IN COMPLIANCE WITH APPLICABLE LAWS AND REGULATIONS.

***** SPECIAL PROTECTION INFORMATION *****

EYE PROTECTION:

NO SPECIAL EQUIPMENT REQUIRED.

SKIN PROTECTION:

NO SPECIAL EQUIPMENT REQUIRED. HOWEVER, GOOD PERSONAL HYGIENE PRACTICES SHOULD ALWAYS BE FOLLOWED.

RESPIRATORY PROTECTION:

NO SPECIAL REQUIREMENTS UNDER ORDINARY CONDITIONS OF USE AND WITH ADEQUATE VENTILATION.

VENTILATION:

NO SPECIAL REQUIREMENTS UNDER ORDINARY CONDITIONS OF USE AND WITH ADEQUATE VENTILATION.

OTHER:

***** SPECIAL PRECAUTIONS *****

HANDLING: NO SPECIAL PRECAUTIONS REQUIRED.

***** TOXICOLOGICAL DATA *****

ACUTE

ORAL TOXICITY: (RATS)

NONTOXIC (ESTIMATED) ---BASED ON TESTING OF SIMILAR PRODUCTS AND/OR THE COMPONENTS.

DERMAL TOXICITY: (RABBITS)

NONTOXIC (ESTIMATED) ---BASED ON TESTING OF SIMILAR PRODUCTS AND/OR THE COMPONENTS.

INHALATION TOXICITY: (RATS)

NOT APPLICABLE ---HARMFUL CONCENTRATIONS OF MISTS AND/OR VAPORS ARE UNLIKELY TO BE ENCOUNTERED THROUGH ANY CUSTOMARY OR REASONABLY FORESEEABLE HANDLING, USE, OR MISUSE OF THIS PRODUCT.

EYE IRRITATION: (RABBITS)

CAUSED NO SIGNIFICANT IRRITATION TO RABBITS. EYE IRRITATION SCORES: 5.3 AT 1 HOUR, 5.0 AT 24 HOURS, 2.0 AT 48 HOURS, 0 AT 72 HOURS

SKIN IRRITATION: (RABBITS)

SLIGHTLY IRRITATING TO RABBITS. PRIMARY IRRITATION SCORE: 1.2/8

SUBACUTE AND MUTAGENICITY (SUMMARY)

CHRONIC OR SPECIALIZED (SUMMARY)

OTHER DATA

NONE

FILE CODES:

(FILL NO: MTL2151J1) MHC: 0* 3* NA C 1 US82-106E-XX-81 APPROVE
8341

ENVIRONMENTAL AFFAIRS AND TOXICOLOGY DEPT.

REVISED:

MANAGER OF PRODUCT SAFETY INFORMATION, PHONE: (212) 883-5594

11/ 1/82

MOBIL MATERIAL SAFETY DATA BULLETIN

MOBIL OIL CORPORATION
ENVIRONMENTAL AFFAIRS AND TOXICOLOGY DEPT.

150 EAST 42ND STREET
NEW YORK, N.Y. 10017 (USA)

***** PRODUCT IDENTIFICATION *****
MOBILGEAR 630

SUPPLIER:
MOBIL OIL CORP.
CHEMICAL NAMES AND SYNONYMS:
PET. HYDROCARBONS AND ADDITIVES
USE OR DESCRIPTION:
INDUSTRIAL GEAR OIL

HEALTH EMERGENCY TELEPHONE:
(212)883-4411
TRANSPORT EMERGENCY TELEPHONE:
(800)424-9300 (CHEMTREC)
OTHER DESIGNATION:
(TRN 610873)

***** TYPICAL CHEMICAL AND PHYSICAL PROPERTIES *****

APPEARANCE:	VISCOSITY: AT 100 F, SUS	AT 40 C, CS
ASTM 6.0 LIQUID	1100.0	210.0
ODOR:	VISCOSITY: AT 210 F, SUS	AT 100 C, CS
MILD	92.0	18.0
RELATIVE DENSITY: 15/4 C	SOLUBILITY IN WATER:	PH:
0.904	NEGLECTIBLE	NA
MELTING POINT: F(C)	POUR POINT: F(C)	
NA	0(-18)	
BOILING POINT: F(C)	FLASH POINT: F(C) (METHOD)	
>600(316)	420(216) (ASTM D-92)	
VAPOR PRESSURE:MM HG 20C		
< .1		

NA=NOT APPLICABLE NE=NOT ESTABLISHED D=DECOMPOSES

***** INGREDIENTS *****

WT PCT	TLV(TWA):	MG/M3	PPM
(APPROX)			

HAZARDOUS INGREDIENTS:
NONE

NON-HAZARDOUS INGREDIENTS:
REFINED MINERAL OILS > 95
ADDITIVES AND/OR OTHER INGREDIENTS. < 5

NOTE: TLVS SHOWN FOR GUIDANCE ONLY. FOLLOW APPLICABLE REGULATIONS.

INFORMATION GIVEN HEREIN IS OFFERED IN GOOD FAITH AS ACCURATE, BUT WITHOUT GUARANTEE. CONDITIONS OF USE AND SUITABILITY OF THE PRODUCT FOR PARTICULAR USES ARE BEYOND OUR CONTROL; ALL RISKS OF USE OF THE PRODUCT ARE THEREFORE ASSUMED BY THE USER AND WE EXPRESSLY DISCLAIM ALL WARRANTIES OF EVERY KIND AND NATURE, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE IN RESPECT TO THE USE OR SUITABILITY OF THE PRODUCT. NOTHING IS INTENDED AS A RECOMMENDATION FOR USES WHICH INFRINGE VALID PATENTS OR AS EXTENDING LICENSE UNDER VALID PATENTS. APPROPRIATE WARNINGS AND SAFE HANDLING PROCEDURES SHOULD BE PROVIDED TO HANDLERS AND USERS.

***** FIRE AND EXPLOSION HAZARD DATA *****

FLASH POINT: F(C) (METHOD) FLAMMABLE LIMITS: LEL UEL
420(216) (ASTM D-92) .6 7.0

EXTINGUISHING MEDIA:

CARBON DIOXIDE, FOAM, DRY CHEMICAL AND WATER FOG.

SPECIAL FIRE FIGHTING PROCEDURES:

FIREFIGHTERS MUST USE SELF-CONTAINED BREATHING APPARATUS.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

NONE

***** HEALTH HAZARD DATA *****

THRESHOLD LIMIT VALUE: (IF ESTABLISHED)

5.00 MG/M3 SUGGESTED FOR OIL MIST

EFFECTS OF OVEREXPOSURE:

SLIGHT SKIN IRRITATION.

***** EMERGENCY AND FIRST AID PROCEDURES *****

EYE CONTACT:

FLUSH WITH WATER.

SKIN CONTACT:

WASH CONTACT AREAS WITH SOAP AND WATER.

INHALATION:

NOT EXPECTED TO BE A PROBLEM.

INGESTION:

NOT EXPECTED TO BE A PROBLEM. HOWEVER, IF GREATER THAN 1/2 LITER(PINT) INGESTED, IMMEDIATELY GIVE 1 TO 2 GLASSES OF WATER AND CALL A PHYSICIAN, HOSPITAL EMERGENCY ROOM OR POISON CONTROL CENTER FOR ASSISTANCE. DO NOT INDUCE VOMITING OR GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON.

***** REACTIVITY DATA *****

STABILITY: (THERMAL, LIGHT, ETC.) CONDITIONS TO AVOID:

STABLE EXTREME HEAT

INCOMPATIBILITY: (MATERIALS TO AVOID)

STRONG OXIDIZERS

HAZARDOUS DECOMPOSITION PRODUCTS:

CARBON MONOXIDE.

HAZARDOUS POLYMERIZATION:

WILL NOT OCCUR

CONDITIONS TO AVOID:

***** SPILL OR LEAK PROCEDURE ***** (2.2)

ENVIRONMENTAL IMPACT:

REPORT SPILLS AS REQUIRED TO APPROPRIATE AUTHORITIES. U. S. COAST GUARD REGULATIONS REQUIRE IMMEDIATE REPORTING OF SPILLS THAT COULD REACH ANY WATERWAY INCLUDING INTERMITTENT DRY CREEKS. REPORT SPILL TO COAST GUARD TOLL FREE NUMBER 800-424-8802.

PROCEDURES IF MATERIAL IS RELEASED OR SPILLED:

ABSORB ON FIRE RETARDANT TREATED SAWDUST, DIATOMACEOUS EARTH, ETC. SHOVEL UP AND DISPOSE OF AT AN APPROPRIATE WASTE DISPOSAL FACILITY IN ACCORDANCE WITH CURRENT APPLICABLE LAWS AND REGULATIONS, AND PRODUCT CHARACTERISTICS AT TIME OF DISPOSAL.

WASTE MANAGEMENT:

DISSOLVE WASTE IN A SOLVENT AND DISPOSE BY SUPERVISED INCINERATION IN COMPLIANCE WITH APPLICABLE LAWS AND REGULATIONS.

***** SPECIAL PROTECTION INFORMATION *****

EYE PROTECTION:

NO SPECIAL EQUIPMENT REQUIRED.

SKIN PROTECTION:

NO SPECIAL EQUIPMENT REQUIRED. HOWEVER, GOOD PERSONAL HYGIENE PRACTICES SHOULD ALWAYS BE FOLLOWED.

RESPIRATORY PROTECTION:

NO SPECIAL REQUIREMENTS UNDER ORDINARY CONDITIONS OF USE AND WITH ADEQUATE VENTILATION.

VENTILATION:

NO SPECIAL REQUIREMENTS UNDER ORDINARY CONDITIONS OF USE AND WITH ADEQUATE VENTILATION.

OTHER:

***** SPECIAL PRECAUTIONS *****

HANDLING: NO SPECIAL PRECAUTIONS REQUIRED.

***** TOXICOLOGICAL DATA *****

ACUTE

ORAL TOXICITY: (RATS)

SLIGHTLY TOXIC (ESTIMATED) ---BASED ON TESTING OF SIMILAR PRODUCTS
AND/OR THE COMPONENTS.

DERMAL TOXICITY: (RABBITS)

SLIGHTLY TOXIC (ESTIMATED) ---BASED ON TESTING OF SIMILAR PRODUCTS
AND/OR THE COMPONENTS.

INHALATION TOXICITY: (RATS)

NOT APPLICABLE ---HARMFUL CONCENTRATIONS OF MISTS AND/OR VAPORS
ARE UNLIKELY TO BE ENCOUNTERED THROUGH ANY CUSTOMARY OR REASONABLY
FORESEEABLE HANDLING, USE, OR MISUSE OF THIS PRODUCT.

EYE IRRITATION: (RABBITS)

EXPECTED TO BE NON-IRRITATING. ---BASED ON TESTING OF SIMILAR
PRODUCTS AND/OR THE COMPONENTS.

SKIN IRRITATION: (RABBITS)

MAY CAUSE SLIGHT IRRITATION ON PROLONGED OR REPEATED CONTACT.
---BASED ON TESTING OF SIMILAR PRODUCTS AND/OR THE COMPONENTS.

SUBACUTE AND MUTAGENICITY (SUMMARY)

CHRONIC OR SPECIALIZED (SUMMARY)

OTHER DATA

FILE CODES:

(FILL NO: RL1221F101) MHC: 1* 1* NA 0* 1* US82-119E-162-78 APPROVE
8322

ENVIRONMENTAL AFFAIRS AND TOXICOLOGY DEPT.

REVISED:

MANAGER OF PRODUCT SAFETY INFORMATION, PHONE: (212) 883-5594 10/13/82

MOBIL MATERIAL SAFETY DATA BULLETIN

MOBIL OIL CORPORATION 150 EAST 42ND STREET
ENVIRONMENTAL AFFAIRS AND TOXICOLOGY DEPT. NEW YORK, N.Y. 10017 (USA)

***** PRODUCT IDENTIFICATION ***** AMBREX 150

SUPPLIER:	HEALTH EMERGENCY TELEPHONE:
MOBIL OIL CORP.	(212) 823-4411
CHEMICAL NAMES AND SYNONYMS:	TRANSPORT EMERGENCY TELEPHONE:
PET. HYDROCARBONS AND ADDITIVES	(800) 424-9300 (CHEMTREC)
USE OR DESCRIPTION:	OTHER DESIGNATION:
CIRCULATING/TURBINE OIL	(TRN 620542)

***** TYPICAL CHEMICAL AND PHYSICAL PROPERTIES *****

APPEARANCE:	VISCOSITY: AT 100 F, SUS	AT 40 C, CS
ASTM 3.0 LIQUID	150.0	29.0
ODOR:	VISCOSITY: AT 210 F, SUS	AT 100 C, CS
MILD	43.0	5.0
RELATIVE DENSITY: 15/4 C	SOLUBILITY IN WATER:	PH:
0.871	NEGLIGIBLE	NA
MELTING POINT: F(C)	POUR POINT: F(C)	
NA	20 (-7)	
BOILING POINT: F(C)	FLASH POINT: F(C) (METHOD)	
>600 (316)	>375 (191) (ASTM D-92)	
VAPOR PRESSURE: MM HG 20C		
< .1		

NA=NOT APPLICABLE NE=NOT ESTABLISHED D=DECOMPOSES

***** INGREDIENTS *****

WT. PCT	TLV (TWA):	MG/M3	PPM
(APPROX)			

HAZARDOUS INGREDIENTS:
NONE

NON-HAZARDOUS INGREDIENTS:
REFINED MINERAL OILS > 95
ADDITIVES AND/OR OTHER INGREDIENTS < 5

NOTE: TLVS SHOWN FOR GUIDANCE ONLY. FOLLOW APPLICABLE REGULATIONS.

INFORMATION GIVEN HEREIN IS OFFERED IN GOOD FAITH AS ACCURATE, BUT WITHOUT GUARANTEE. CONDITIONS OF USE AND SUITABILITY OF THE PRODUCT FOR PARTICULAR USES ARE BEYOND OUR CONTROL; ALL RISKS OF USE OF THE PRODUCT ARE THEREFORE ASSUMED BY THE USER AND WE EXPRESSLY DISCLAIM ALL WARRANTIES OF EVERY KIND AND NATURE, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE IN RESPECT TO THE USE OR SUITABILITY OF THE PRODUCT. NOTHING IS INTENDED AS A RECOMMENDATION FOR USES WHICH INFRINGE VALID PATENTS OR AS EXTENDING LICENSE UNDER VALID PATENTS. APPROPRIATE WARNINGS AND SAFE HANDLING PROCEDURES SHOULD BE PROVIDED TO HANDLERS AND USERS.

***** FIRE AND EXPLOSION HAZARD DATA *****

FLASH POINT: F(C) (METHOD) FLAMMABLE LIMITS: LEL UEL
> 375(191) (ASTM D-92) .6 7.0

EXTINGUISHING MEDIA:

CARBON DIOXIDE, FOAM, DRY CHEMICAL AND WATER FOG.

SPECIAL FIRE FIGHTING PROCEDURES:

FIREFIGHTERS MUST USE SELF-CONTAINED BREATHING APPARATUS.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

NONE

***** HEALTH HAZARD DATA *****
THRESHOLD LIMIT VALUE: (IF ESTABLISHED)

EFFECTS OF OVEREXPOSURE:

SLIGHT EYE IRRITATION. SLIGHT SKIN IRRITATION.

***** EMERGENCY AND FIRST AID PROCEDURES *****
EYE CONTACT:

FLUSH WITH WATER.

SKIN CONTACT:

WASH CONTACT AREAS WITH SOAP AND WATER.

INHALATION:

NOT EXPECTED TO BE A PROBLEM.

INGESTION:

NOT EXPECTED TO BE A PROBLEM. HOWEVER, IF GREATER THAN 1/2 LITER(PINT) INGESTED, IMMEDIATELY GIVE 1 TO 2 GLASSES OF WATER AND CALL A PHYSICIAN, HOSPITAL EMERGENCY ROOM OR POISON CONTROL CENTER FOR ASSISTANCE. DO NOT INDUCE VOMITING OR GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON.

***** REACTIVITY DATA *****
STABILITY: (THERMAL, LIGHT, ETC.) CONDITIONS TO AVOID:

STABLE EXTREME HEAT

INCOMPATIBILITY: (MATERIALS TO AVOID)

STRONG OXIDIZERS

HAZARDOUS DECOMPOSITION PRODUCTS:

CARBON MONOXIDE.

HAZARDOUS POLYMERIZATION:

WILL NOT OCCUR

CONDITIONS TO AVOID:

***** SPILL OR LEAK PROCEDURE *****
ENVIRONMENTAL IMPACT:

REPORT SPILLS AS REQUIRED TO APPROPRIATE AUTHORITIES. U. S. COAST GUARD REGULATIONS REQUIRE IMMEDIATE REPORTING OF SPILLS THAT COULD REACH ANY WATERWAY INCLUDING INTERMITTENT DRY CREEKS. REPORT SPILL TO COAST GUARD TOLL FREE NUMBER 800-424-8802.

PROCEDURES IF MATERIAL IS RELEASED OR SPILLED:

ABSORB ON FIRE RETARDANT TREATED SAWDUST, DIATOMACEOUS EARTH, ETC. SHOVEL UP AND DISPOSE OF AT AN APPROPRIATE WASTE DISPOSAL FACILITY IN ACCORDANCE WITH CURRENT APPLICABLE LAWS AND REGULATIONS, AND PRODUCT CHARACTERISTICS AT TIME OF DISPOSAL.

WASTE MANAGEMENT:

DISPOSE OF WASTE BY SUPERVISED INCINERATION IN COMPLIANCE WITH APPLICABLE LAWS AND REGULATIONS.

***** SPECIAL PROTECTION INFORMATION *****

EYE PROTECTION:

NORMAL INDUSTRIAL EYE PROTECTION PRACTICES SHOULD BE EMPLOYED.

SKIN PROTECTION:

NO SPECIAL EQUIPMENT REQUIRED. HOWEVER, GOOD PERSONAL HYGIENE PRACTICES SHOULD ALWAYS BE FOLLOWED.

RESPIRATORY PROTECTION:

NO SPECIAL REQUIREMENTS UNDER ORDINARY CONDITIONS OF USE AND WITH ADEQUATE VENTILATION.

VENTILATION:

NO SPECIAL REQUIREMENTS UNDER ORDINARY CONDITIONS OF USE AND WITH ADEQUATE VENTILATION.

OTHER:

***** SPECIAL PRECAUTIONS *****

HANDLING: NO SPECIAL PRECAUTIONS REQUIRED.

***** TOXICOLOGICAL DATA *****

ACUTE

ORIGINAL
(Red)

ORAL TOXICITY: (RATS)

LD50: > 5 G/KG SLIGHTLY TOXIC (ESTIMATED) ---BASED ON TESTING OF
SIMILAR PRODUCTS AND/OR THE COMPONENTS.

DERMAL TOXICITY: (RABBITS)

LD50: > 2 G/KG SLIGHTLY TOXIC (ESTIMATED) ---BASED ON TESTING OF
SIMILAR PRODUCTS AND/OR THE COMPONENTS.

INHALATION TOXICITY: (RATS)

NOT APPLICABLE ---HARMFUL CONCENTRATIONS OF MISTS AND/OR VAPORS
ARE UNLIKELY TO BE ENCOUNTERED THROUGH ANY CUSTOMARY OR REASONABLY
FORESEEABLE HANDLING, USE, OR MISUSE OF THIS PRODUCT.

EYE IRRITATION: (RABBITS)

MAY CAUSE SLIGHT IRRITATION. ---BASED ON TESTING OF SIMILAR
PRODUCTS AND/OR THE COMPONENTS.

SKIN IRRITATION: (RABBITS)

MAY CAUSE SLIGHT IRRITATION ON PROLONGED OR REPEATED CONTACT.
---BASED ON TESTING OF SIMILAR PRODUCTS AND/OR THE COMPONENTS.

SUBACUTE AND MUTAGENICITY (SUMMARY)

CHRONIC OR SPECIALIZED (SUMMARY)

OTHER DATA

FILE CODES:

(FILL NO: MTL59A001) MHC: 1* 1* NA 1* 1* US82-062E-205-72 APPROVE
8215

ENVIRONMENTAL AFFAIRS AND TOXICOLOGY DEPT.

MANAGER OF PRODUCT SAFETY INFORMATION, PHONE: (212) 883-5594

REVISED:

6/28/82

MOBIL MATERIAL SAFETY DATA BULLETIN

ORIGINAL
(Red)

MOBIL OIL CORPORATION
ENVIRONMENTAL AFFAIRS AND TOXICOLOGY DEPT.

150 EAST 42ND STREET
NEW YORK, N.Y. 10017 (USA)

***** PRODUCT IDENTIFICATION *****

AMBREX 300

SUPPLIER:	HEALTH EMERGENCY TELEPHONE:
MOBIL OIL CORP.	(212)883-4411
CHEMICAL NAMES AND SYNONYMS:	TRANSPORT EMERGENCY TELEPHONE:
PET. HYDROCARBONS AND ADDITIVES	(800)424-9300 (CHEMTREC)
USE OR DESCRIPTION:	OTHER DESIGNATION:
CIRCULATING/TURBINE OIL	(TRN 620583)

***** TYPICAL CHEMICAL AND PHYSICAL PROPERTIES *****

APPEARANCE:	VISCOSITY: AT 100 F, SUS	AT 40 C, CS
ASTM 5.0 LIQUID	295.0	57.0
ODOR:	VISCOSITY: AT 210 F, SUS	AT 100 C, CS
MILD	53.0	8.0
RELATIVE DENSITY: 15/4 C	SOLUBILITY IN WATER:	PH:
0.881	NEGLIGIBLE	NA
MELTING POINT: F(C)	POUR POINT: F(C)	
NA	20(-7)	
BOILING POINT: F(C)	FLASH POINT: F(C) (METHOD)	
>600(316)	>400(204) (ASTM D-92)	
VAPOR PRESSURE:MM HG 20C		
< .1		

NA=NOT APPLICABLE NE=NOT ESTABLISHED D=DECOMPOSES

***** INGREDIENTS *****

	WT PCT	TLV(TWA):	MG/M3	PPM
	(APPROX)			
HAZARDOUS INGREDIENTS:				
NONE				
NON-HAZARDOUS INGREDIENTS:				
REFINED MINERAL OILS	> 95			
ADDITIVES AND/OR OTHER INGREDIENTS.	< 5			

NOTE: TLVS SHOWN FOR GUIDANCE ONLY. FOLLOW APPLICABLE REGULATIONS.

INFORMATION GIVEN HEREIN IS OFFERED IN GOOD FAITH AS ACCURATE, BUT WITHOUT GUARANTEE. CONDITIONS OF USE AND SUITABILITY OF THE PRODUCT FOR PARTICULAR USES ARE BEYOND OUR CONTROL; ALL RISKS OF USE OF THE PRODUCT ARE THEREFORE ASSUMED BY THE USER AND WE EXPRESSLY DISCLAIM ALL WARRANTIES OF EVERY KIND AND NATURE, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE IN RESPECT TO THE USE OR SUITABILITY OF THE PRODUCT. NOTHING IS INTENDED AS A RECOMMENDATION FOR USES WHICH INFRINGE VALID PATENTS OR AS EXTENDING LICENSE UNDER VALID PATENTS. APPROPRIATE WARNINGS AND SAFE HANDLING PROCEDURES SHOULD BE PROVIDED TO HANDLERS AND USERS.

***** FIRE AND EXPLOSION HAZARD DATA *****

FLASH POINT: F(C) (METHOD) FLAMMABLE LIMITS: LEL UEL
 > 400(204) (ASTM D-92) .5 7.0
 EXTINGUISHING MEDIA:
 CARBON DIOXIDE, FOAM, DRY CHEMICAL AND WATER FOG.
 SPECIAL FIRE FIGHTING PROCEDURES:
 FIREFIGHTERS MUST USE SELF-CONTAINED BREATHING APPARATUS.

UNUSUAL FIRE AND EXPLOSION HAZARDS:
 NONE

***** HEALTH HAZARD DATA *****
 THRESHOLD LIMIT VALUE: (IF ESTABLISHED)

EFFECTS OF OVEREXPOSURE:
 SLIGHT EYE IRRITATION. SLIGHT SKIN IRRITATION.

***** EMERGENCY AND FIRST AID PROCEDURES *****
 EYE CONTACT:
 FLUSH WITH WATER.

SKIN CONTACT:
 WASH CONTACT AREAS WITH SOAP AND WATER.

INHALATION:
 NOT EXPECTED TO BE A PROBLEM.

INGESTION:
 NOT EXPECTED TO BE A PROBLEM. HOWEVER, IF GREATER THAN 1/2 LITER(PINT) INGESTED, IMMEDIATELY GIVE 1 TO 2 GLASSES OF WATER AND CALL A PHYSICIAN, HOSPITAL EMERGENCY ROOM OR POISON CONTROL CENTER FOR ASSISTANCE. DO NOT INDUCE VOMITING OR GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON.

***** REACTIVITY DATA *****
 STABILITY: (THERMAL, LIGHT, ETC.) CONDITIONS TO AVOID:
 STABLE EXTREME HEAT

INCOMPATIBILITY: (MATERIALS TO AVOID)
 STRONG OXIDIZERS

HAZARDOUS DECOMPOSITION PRODUCTS:
 CARBON MONOXIDE.

HAZARDOUS POLYMERIZATION: CONDITIONS TO AVOID:
 WILL NOT OCCUR

***** SPILL OR LEAK PROCEDURE *****
ENVIRONMENTAL IMPACT:

REPORT SPILLS AS REQUIRED TO APPROPRIATE AUTHORITIES. U. S. COAST GUARD REGULATIONS REQUIRE IMMEDIATE REPORTING OF SPILLS THAT COULD REACH ANY WATERWAY INCLUDING INTERMITTENT DRY CREEKS. REPORT SPILL TO COAST GUARD TOLL FREE NUMBER 800-424-8802.

PROCEDURES IF MATERIAL IS RELEASED OR SPILLED:

ABSORB ON FIRE RETARDANT TREATED SAWDUST, DIATOMACEOUS EARTH, ETC. SHOVEL UP AND DISPOSE OF AT AN APPROPRIATE WASTE DISPOSAL FACILITY IN ACCORDANCE WITH CURRENT APPLICABLE LAWS AND REGULATIONS, AND PRODUCT CHARACTERISTICS AT TIME OF DISPOSAL.

WASTE MANAGEMENT:

DISSOLVE WASTE IN A SOLVENT AND DISPOSE BY SUPERVISED INCINERATION IN COMPLIANCE WITH APPLICABLE LAWS AND REGULATIONS.

***** SPECIAL PROTECTION INFORMATION *****
EYE PROTECTION:

NORMAL INDUSTRIAL EYE PROTECTION PRACTICES SHOULD BE EMPLOYED.

SKIN PROTECTION:

NO SPECIAL EQUIPMENT REQUIRED. HOWEVER, GOOD PERSONAL HYGIENE PRACTICES SHOULD ALWAYS BE FOLLOWED.

RESPIRATORY PROTECTION:

NO SPECIAL REQUIREMENTS UNDER ORDINARY CONDITIONS OF USE AND WITH ADEQUATE VENTILATION.

VENTILATION:

NO SPECIAL REQUIREMENTS UNDER ORDINARY CONDITIONS OF USE AND WITH ADEQUATE VENTILATION.

OTHER:

***** SPECIAL PRECAUTIONS *****
HANDLING: NO SPECIAL PRECAUTIONS REQUIRED.

***** TOXICOLOGICAL DATA *****

ACUTE

ORAL TOXICITY: (RATS)

LD50: > 5 G/KG 2/10 RATS DIED AT THIS DOSAGE LEVEL. SLIGHTLY TOXIC (ESTIMATED) ---BASED ON TESTING OF SIMILAR PRODUCTS AND/OR THE COMPONENTS.

DERMAL TOXICITY: (RABBITS)

LD50: > 2 G/KG 0/10 RABBITS DIED AT THIS DOSAGE LEVEL. SLIGHTLY TOXIC (ESTIMATED) ---BASED ON TESTING OF SIMILAR PRODUCTS AND/OR THE COMPONENTS.

INHALATION TOXICITY: (RATS)

NOT APPLICABLE ---HARMFUL CONCENTRATIONS OF MISTS AND/OR VAPORS ARE UNLIKELY TO BE ENCOUNTERED THROUGH ANY CUSTOMARY OR REASONABLY FORESEEABLE HANDLING, USE, OR MISUSE OF THIS PRODUCT.

EYE IRRITATION: (RABBITS)

MAY CAUSE SLIGHT IRRITATION. EYE IRRITATION SCORES: 3.3 AT 24 HOURS, 0 AT 48 HOURS, 0 AT 72 HOURS---BASED ON TESTING OF SIMILAR PRODUCTS AND/OR THE COMPONENTS.

SKIN IRRITATION: (RABBITS)

MAY CAUSE SLIGHT IRRITATION ON PROLONGED OR REPEATED CONTACT. PRIMARY IRRITATION SCORE: 0/8---BASED ON TESTING OF SIMILAR PRODUCTS AND/OR THE COMPONENTS.

SUBACUTE AND MUTAGENICITY (SUMMARY)

CHRONIC OR SPECIALIZED (SUMMARY)

OTHER DATA

FILE CODES:

(FILL NO: MTL59C22J2) MHC: 1* 1* NA 1* 1* USR2-062E-205-72 APPROVE
8282

ENVIRONMENTAL AFFAIRS AND TOXICOLOGY DEPT.

REVISED:

MANAGER OF PRODUCT SAFETY INFORMATION, PHONE: (212) 883-5594

9/ 3/82

MOBIL MATERIAL SAFETY DATA BULLETIN

MOBIL OIL CORPORATION
ENVIRONMENTAL AFFAIRS AND TOXICOLOGY DEPT.

150 EAST 42ND STREET
NEW YORK, N.Y. 10017 (USA)

***** PRODUCT IDENTIFICATION ***** FLOWREX 100

SUPPLIER:	HEALTH EMERGENCY TELEPHONE:
MOBIL OIL CORP.	(212)893-4411
CHEMICAL NAMES AND SYNONYMS:	TRANSPORT EMERGENCY TELEPHONE:
PETROLEUM HYDROCARBONS	(800)424-9300 (CHEMTREC)
USE OR DESCRIPTION:	OTHER DESIGNATION:
LUBRICATING OIL	(TRN 621581)

***** TYPICAL CHEMICAL AND PHYSICAL PROPERTIES *****

APPEARANCE:	VISCOSITY: AT 100 F, SUS	AT 40 C, CS
ASTM 3.5 LIQUID	110.0	20.0
ODOR:	VISCOSITY: AT 210 F, SUS	AT 100 C, CS
MILD	38.0	3.7
RELATIVE DENSITY: 15/4 C	SOLUBILITY IN WATER:	PH:
0.915	NEGLIGIBLE	NA
MELTING POINT: F(C)	POUR POINT: F(C)	
NA	0(-18)	
BOILING POINT: F(C)	FLASH POINT: F(C) (METHOD)	
>600 (316)	>300 (149) (ASTM D-92)	
VAPOR PRESSURE:MM HG 20C		
< .1		

NA=NOT APPLICABLE NE=NOT ESTABLISHED D=DECOMPOSES

***** INGREDIENTS *****

WT PCT	TLV(TWA):	MG/M3	PPM
(APPROX)			

HAZARDOUS INGREDIENTS:
NONE

NON-HAZARDOUS INGREDIENTS:
REFINED MINERAL OILS

100

NOTE: TLVS SHOWN FOR GUIDANCE ONLY. FOLLOW APPLICABLE REGULATIONS.

INFORMATION GIVEN HEREIN IS OFFERED IN GOOD FAITH AS ACCURATE, BUT WITHOUT GUARANTEE. CONDITIONS OF USE AND SUITABILITY OF THE PRODUCT FOR PARTICULAR USES ARE BEYOND OUR CONTROL; ALL RISKS OF USE OF THE PRODUCT ARE THEREFORE ASSUMED BY THE USER AND WE EXPRESSLY DISCLAIM ALL WARRANTIES OF EVERY KIND AND NATURE, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE IN RESPECT TO THE USE OR SUITABILITY OF THE PRODUCT. NOTHING IS INTENDED AS A RECOMMENDATION FOR USES WHICH INFRINGE VALID PATENTS OR AS EXTENDING LICENSE UNDER VALID PATENTS. APPROPRIATE WARNINGS AND SAFE HANDLING PROCEDURES SHOULD BE PROVIDED TO HANDLERS AND USERS.

***** FIRE AND EXPLOSION HAZARD DATA *****

FLASH POINT: F(C) (METHOD) FLAMMABLE LIMITS: LEL UEL
> 300(149) (ASTM D-92) .6 7.0

EXTINGUISHING MEDIA:

CARBON DIOXIDE, FOAM, DRY CHEMICAL AND WATER FOG.

SPECIAL FIRE FIGHTING PROCEDURES:

FIREFIGHTERS MUST USE SELF-CONTAINED BREATHING APPARATUS.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

NONE

***** HEALTH HAZARD DATA *****

THRESHOLD LIMIT VALUE: (IF ESTABLISHED)

5.00 MG/M3 SUGGESTED FOR OIL MIST

EFFECTS OF OVEREXPOSURE:

SLIGHT SKIN IRRITATION.

***** EMERGENCY AND FIRST AID PROCEDURES *****

EYE CONTACT:

FLUSH WITH WATER.

SKIN CONTACT:

WASH CONTACT AREAS WITH SOAP AND WATER.

INHALATION:

NOT EXPECTED TO BE A PROBLEM.

INGESTION:

NOT EXPECTED TO BE A PROBLEM WHEN INGESTED. IF UNCOMFORTABLE
SEEK MEDICAL ASSISTANCE.

***** REACTIVITY DATA *****

STABILITY: (THERMAL, LIGHT, ETC.) CONDITIONS TO AVOID:

STABLE EXTREME HEAT

INCOMPATIBILITY: (MATERIALS TO AVOID)

STRONG OXIDIZERS

HAZARDOUS DECOMPOSITION PRODUCTS:

CARBON MONOXIDE.

HAZARDOUS POLYMERIZATION:

WILL NOT OCCUR

CONDITIONS TO AVOID:

***** SPILL OR LEAK PROCEDURE *****
ENVIRONMENTAL IMPACT:

REPORT SPILLS AS REQUIRED TO APPROPRIATE AUTHORITIES. U. S. COAST GUARD REGULATIONS REQUIRE IMMEDIATE REPORTING OF SPILLS THAT COULD REACH ANY WATERWAY INCLUDING INTERMITTENT DRY CREEKS. REPORT SPILL TO COAST GUARD TOLL FREE NUMBER 800-424-8802.

PROCEDURES IF MATERIAL IS RELEASED OR SPILLED:

ABSORB ON FIRE RETARDANT TREATED SAWDUST, DIATOMACEOUS EARTH, ETC. SHOVEL UP AND DISPOSE OF AT AN APPROPRIATE WASTE DISPOSAL FACILITY IN ACCORDANCE WITH CURRENT APPLICABLE LAWS AND REGULATIONS, AND PRODUCT CHARACTERISTICS AT TIME OF DISPOSAL.

WASTE MANAGEMENT:

DISPOSE OF WASTE BY SUPERVISED INCINERATION IN COMPLIANCE WITH APPLICABLE LAWS AND REGULATIONS.

***** SPECIAL PROTECTION INFORMATION *****

EYE PROTECTION:

NO SPECIAL EQUIPMENT REQUIRED.

SKIN PROTECTION:

NO SPECIAL EQUIPMENT REQUIRED. HOWEVER, GOOD PERSONAL HYGIENE PRACTICES SHOULD ALWAYS BE FOLLOWED.

RESPIRATORY PROTECTION:

NO SPECIAL REQUIREMENTS UNDER ORDINARY CONDITIONS OF USE AND WITH ADEQUATE VENTILATION.

VENTILATION:

NO SPECIAL REQUIREMENTS UNDER ORDINARY CONDITIONS OF USE AND WITH ADEQUATE VENTILATION.

OTHER:

***** SPECIAL PRECAUTIONS *****

HANDLING: NO SPECIAL PRECAUTIONS REQUIRED.

***** TOXICOLOGICAL DATA *****

ACUTE

ORAL TOXICITY: (RATS)

LD50: > 5 G/KG NONTOXIC(ESTIMATED) ---BASED ON TESTING OF
SIMILAR PRODUCTS AND/OR THE COMPONENTS.

DERMAL TOXICITY: (RABBITS)

LD50: > 2 G/KG NONTOXIC(ESTIMATED) ---BASED ON TESTING OF SIMILAR
PRODUCTS AND/OR THE COMPONENTS.

INHALATION TOXICITY: (RATS)

NOT APPLICABLE ---HARMFUL CONCENTRATIONS OF MISTS AND/OR VAPORS
ARE UNLIKELY TO BE ENCOUNTERED THROUGH ANY CUSTOMARY OR REASONABLY
FORESEEABLE HANDLING, USE, OR MISUSE OF THIS PRODUCT.

EYE IRRITATION: (RABBITS)

EXPECTED TO BE NON-IRRITATING. ---BASED ON TESTING OF SIMILAR
PRODUCTS AND/OR THE COMPONENTS.

SKIN IRRITATION: (RABBITS)

MAY CAUSE SLIGHT IRRITATION ON PROLONGED OR REPEATED CONTACT.
---BASED ON TESTING OF SIMILAR PRODUCTS AND/OR THE COMPONENTS.

SUBACUTE AND MUTAGENICITY (SUMMARY)

CHRONIC OR SPECIALIZED (SUMMARY)

OTHER DATA

FILE CODES:

(FILL NO: TSD037J02) MHC: 0* 0* NA 0* 1* US82-084NONE

8294

APPROVE

ENVIRONMENTAL AFFAIRS AND TOXICOLOGY DEPT.

REVISED:

MANAGER OF PRODUCT SAFETY INFORMATION, PHONE: (212) 883-5594

9/15/82

MOBIL MATERIAL SAFETY DATA BULLETIN

MOBIL OIL CORPORATION
ENVIRONMENTAL AFFAIRS AND TOXICOLOGY DEPT.

150 EAST 42ND STREET
NEW YORK, N.Y. 10017 (USA)

***** PRODUCT IDENTIFICATION *****
FLOWREX 200

SUPPLIER:
MOBIL OIL CORP.
CHEMICAL NAMES AND SYNONYMS:
PETROLEUM HYDROCARBONS
USE OR DESCRIPTION:
LUBRICANT

HEALTH EMERGENCY TELEPHONE:
(212)883-4411
TRANSPORT EMERGENCY TELEPHONE:
(800)424-9300 (CHEMTREC)
OTHER DESIGNATION:
(TRN 621649)

***** TYPICAL CHEMICAL AND PHYSICAL PROPERTIES *****

APPEARANCE:	VISCOSITY: AT 100 F, SUS	AT 40 C, CS
ASTM 3.5 LIQUID	200.0	39.0
ODOR:	VISCOSITY: AT 210 F, SUS	AT 100 C, CS
MILD	44.0	5.0
RELATIVE DENSITY: 15/4 C	SOLUBILITY IN WATER:	PH:
0.912	NEGLIGIBLE	NA
MELTING POINT: F(C)	POUR POINT: F(C)	
NA	0(-18)	
BOILING POINT: F(C)	FLASH POINT: F(C) (METHOD)	
>600(316)	>330(166) (ASTM D-92)	
VAPOR PRESSURE:MM HG 20C		
< .1		

NA=NOT APPLICABLE NE=NOT ESTABLISHED D=DECOMPOSES

***** INGREDIENTS *****

WT PCT	TLV(TWA):	MG/M3	PPM
(APPROX)			

HAZARDOUS INGREDIENTS:
NONE

NON-HAZARDOUS INGREDIENTS:
REFINED MINERAL OILS

100

NOTE: TLVS SHOWN FOR GUIDANCE ONLY. FOLLOW APPLICABLE REGULATIONS.

INFORMATION GIVEN HEREIN IS OFFERED IN GOOD FAITH AS ACCURATE, BUT WITHOUT GUARANTEE. CONDITIONS OF USE AND SUITABILITY OF THE PRODUCT FOR PARTICULAR USES ARE BEYOND OUR CONTROL; ALL RISKS OF USE OF THE PRODUCT ARE THEREFORE ASSUMED BY THE USER AND WE EXPRESSLY DISCLAIM ALL WARRANTIES OF EVERY KIND AND NATURE, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE IN RESPECT TO THE USE OR SUITABILITY OF THE PRODUCT. NOTHING IS INTENDED AS A RECOMMENDATION FOR USES WHICH INFRINGE VALID PATENTS OR AS EXTENDING LICENSE UNDER VALID PATENTS. APPROPRIATE WARNINGS AND SAFE HANDLING PROCEDURES SHOULD BE PROVIDED TO HANDLERS AND USERS.

***** FIRE AND EXPLOSION HAZARD DATA *****

FLASH POINT: F(C) (METHOD)	FLAMMABLE LIMITS: LEL	UEL
> 330(166) (ASTM D-92)	.6	7.0
EXTINGUISHING MEDIA:		

CARBON DIOXIDE, FOAM, DRY CHEMICAL AND WATER FOG.
SPECIAL FIRE FIGHTING PROCEDURES:
FIREFIGHTERS MUST USE SELF-CONTAINED BREATHING APPARATUS.

UNUSUAL FIRE AND EXPLOSION HAZARDS:
NONE

***** HEALTH HAZARD DATA *****

THRESHOLD LIMIT VALUE: (IF ESTABLISHED)
5.00 MG/M3 SUGGESTED FOR OIL MIST
EFFECTS OF OVEREXPOSURE:
SLIGHT SKIN IRRITATION.

***** EMERGENCY AND FIRST AID PROCEDURES *****

EYE CONTACT:
FLUSH WITH WATER.

SKIN CONTACT:
WASH CONTACT AREAS WITH SOAP AND WATER.

INHALATION:
NOT EXPECTED TO BE A PROBLEM.

INGESTION:
NOT EXPECTED TO BE A PROBLEM WHEN INGESTED. IF UNCOMFORTABLE
SEEK MEDICAL ASSISTANCE.

***** REACTIVITY DATA *****

STABILITY: (THERMAL, LIGHT, ETC.)	CONDITIONS TO AVOID:
STABLE	EXTREME HEAT

INCOMPATIBILITY: (MATERIALS TO AVOID)
STRONG OXIDIZERS

HAZARDOUS DECOMPOSITION PRODUCTS:
CARBON MONOXIDE.

HAZARDOUS POLYMERIZATION: CONDITIONS TO AVOID:
WILL NOT OCCUR

***** SPILL OR LEAK PROCEDURE *****

ENVIRONMENTAL IMPACT:

REPORT SPILLS AS REQUIRED TO APPROPRIATE AUTHORITIES. U. S. COAST GUARD REGULATIONS REQUIRE IMMEDIATE REPORTING OF SPILLS THAT COULD REACH ANY WATERWAY INCLUDING INTERMITTENT DRY CREEKS. REPORT SPILL TO COAST GUARD TOLL FREE NUMBER 800-424-8802.

PROCEDURES IF MATERIAL IS RELEASED OR SPILLED:

ABSORB ON FIRE RETARDANT TREATED SAWDUST, DIATOMACEOUS EARTH, ETC. SHOVEL UP AND DISPOSE OF AT AN APPROPRIATE WASTE DISPOSAL FACILITY IN ACCORDANCE WITH CURRENT APPLICABLE LAWS AND REGULATIONS, AND PRODUCT CHARACTERISTICS AT TIME OF DISPOSAL.

WASTE MANAGEMENT:

DISSOLVE WASTE IN A SOLVENT AND DISPOSE BY SUPERVISED INCINERATION IN COMPLIANCE WITH APPLICABLE LAWS AND REGULATIONS.

***** SPECIAL PROTECTION INFORMATION *****

EYE PROTECTION:

NO SPECIAL EQUIPMENT REQUIRED.

SKIN PROTECTION:

NO SPECIAL EQUIPMENT REQUIRED. HOWEVER, GOOD PERSONAL HYGIENE PRACTICES SHOULD ALWAYS BE FOLLOWED.

RESPIRATORY PROTECTION:

NO SPECIAL REQUIREMENTS UNDER ORDINARY CONDITIONS OF USE AND WITH ADEQUATE VENTILATION.

VENTILATION:

NO SPECIAL REQUIREMENTS UNDER ORDINARY CONDITIONS OF USE AND WITH ADEQUATE VENTILATION.

OTHER:

***** SPECIAL PRECAUTIONS *****

HANDLING: NO SPECIAL PRECAUTIONS REQUIRED.

***** TOXICOLOGICAL DATA *****

ACUTE

ORAL TOXICITY: (RATS)

LD50: > 15 G/KG NONTOXIC(ESTIMATED) ---BASED ON TESTING OF
SIMILAR PRODUCTS AND/OR THE COMPONENTS.

DERMAL TOXICITY: (RABBITS)

LD50: > 5 G/KG NONTOXIC(ESTIMATED) ---BASED ON TESTING OF SIMILAR
PRODUCTS AND/OR THE COMPONENTS.

INHALATION TOXICITY: (RATS)

NOT APPLICABLE ---HARMFUL CONCENTRATIONS OF MISTS AND/OR VAPORS
ARE UNLIKELY TO BE ENCOUNTERED THROUGH ANY CUSTOMARY OR REASONABLY
FORESEEABLE HANDLING, USE, OR MISUSE OF THIS PRODUCT.

EYE IRRITATION: (RABBITS)

EXPECTED TO BE NON-IRRITATING. ---BASED ON TESTING OF SIMILAR
PRODUCTS AND/OR THE COMPONENTS.

SKIN IRRITATION: (RABBITS)

MAY CAUSE SLIGHT IRRITATION ON PROLONGED OR REPEATED CONTACT.
---BASED ON TESTING OF SIMILAR PRODUCTS AND/OR THE COMPONENTS.

SUBACUTE AND MUTAGENICITY (SUMMARY)

CHRONIC OR SPECIALIZED (SUMMARY)

OTHER DATA

FILE CODES:

(FILL NO: TSD039202) MHC: C* 0* NA C* 1* US82-C84NONE
8294

APPROVE

ENVIRONMENTAL AFFAIRS AND TOXICOLOGY DEPT.

MANAGER OF PRODUCT SAFETY INFORMATION, PHONE: (212) 883-5594

REVISED:

9/15/82

MOBIL MATERIAL SAFETY DATA BULLETIN

MOBIL OIL CORPORATION
ENVIRONMENTAL AFFAIRS AND TOXICOLOGY DEPT.

150 EAST 42ND STREET
NEW YORK, N.Y. 10017 (USA)

***** PRODUCT IDENTIFICATION *****
FLOWREX 500

SUPPLIER:
MOBIL OIL CORP.
CHEMICAL NAMES AND SYNONYMS:
PETROLEUM HYDROCARBONS
USE OR DESCRIPTION:
LUBRICANT

HEALTH EMERGENCY TELEPHONE:
(212)883-4411
TRANSPORT EMERGENCY TELEPHONE:
(800)424-9300 (CHEMTREC)
OTHER DESIGNATION:
(TRN 621797)

***** TYPICAL CHEMICAL AND PHYSICAL PROPERTIES *****

APPEARANCE:	VISCOSITY: AT 100 F, SUS	AT 40 C, CS
ASTM 6.5 LIQUID	500.0	95.0
ODOR:	VISCOSITY: AT 210 F, SUS	AT 100 C, CS
MILD	56.0	8.0
RELATIVE DENSITY: 15/4 C	SOLUBILITY IN WATER:	PH:
0.92	NEGLIGIBLE	NA
MELTING POINT: F(C)	POUR POINT: F(C)	
NA	(-18)	
BOILING POINT: F(C)	FLASH POINT: F(C) (METHOD)	
>600(316)	>375(191) (ASTM D-92)	
VAPOR PRESSURE:MM HG 20C		
< .1		

NA=NOT APPLICABLE NE=NOT ESTABLISHED D=DECOMPOSES

***** INGREDIENTS *****

	WT PCT	TLV(TWA):	MG/M3	PPM
HAZARDOUS INGREDIENTS:	(APPROX)			
NONE				
NON-HAZARDOUS INGREDIENTS:				
REFINED MINERAL OILS	100			

NOTE: TLVS SHOWN FOR GUIDANCE ONLY. FOLLOW APPLICABLE REGULATIONS.

INFORMATION GIVEN HEREIN IS OFFERED IN GOOD FAITH AS ACCURATE, BUT WITHOUT GUARANTEE. CONDITIONS OF USE AND SUITABILITY OF THE PRODUCT FOR PARTICULAR USES ARE BEYOND OUR CONTROL; ALL RISKS OF USE OF THE PRODUCT ARE THEREFORE ASSUMED BY THE USER AND WE EXPRESSLY DISCLAIM ALL WARRANTIES OF EVERY KIND AND NATURE, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE IN RESPECT TO THE USE OR SUITABILITY OF THE PRODUCT. NOTHING IS INTENDED AS A RECOMMENDATION FOR USES WHICH INFRINGE VALID PATENTS OR AS EXTENDING LICENSE UNDER VALID PATENTS. APPROPRIATE WARNINGS AND SAFE HANDLING PROCEDURES SHOULD BE PROVIDED TO HANDLERS AND USERS.

***** FIRE AND EXPLOSION HAZARD DATA *****

FLASH POINT: F(C) (METHOD) FLAMMABLE LIMITS: LEL UEL
 > 375(191) (ASTM D-92) .6 7.0

EXTINGUISHING MEDIA:
 CARBON DIOXIDE, FOAM, DRY CHEMICAL AND WATER FOG.

SPECIAL FIRE FIGHTING PROCEDURES:
 FIREFIGHTERS MUST USE SELF-CONTAINED BREATHING APPARATUS.

UNUSUAL FIRE AND EXPLOSION HAZARDS:
 NONE

***** HEALTH HAZARD DATA *****

THRESHOLD LIMIT VALUE: (IF ESTABLISHED)
 5.00 MG/M3 SUGGESTED FOR OIL MIST

EFFECTS OF OVEREXPOSURE:
 NOT EXPECTED TO BE A PROBLEM.

***** EMERGENCY AND FIRST AID PROCEDURES *****

EYE CONTACT:
 FLUSH WITH WATER.

SKIN CONTACT:
 WASH CONTACT AREAS WITH SOAP AND WATER.

INHALATION:
 NOT EXPECTED TO BE A PROBLEM.

INGESTION:
 NOT EXPECTED TO BE A PROBLEM WHEN INGESTED. IF UNCOMFORTABLE
 SEEK MEDICAL ASSISTANCE.

***** REACTIVITY DATA *****

STABILITY: (THERMAL, LIGHT, ETC.) CONDITIONS TO AVOID:
 STABLE EXTREME HEAT

INCOMPATIBILITY: (MATERIALS TO AVOID)
 STRONG OXIDIZERS

HAZARDOUS DECOMPOSITION PRODUCTS:
 CARBON MONOXIDE.

HAZARDOUS POLYMERIZATION: CONDITIONS TO AVOID:
 WILL NOT OCCUR

***** SPILL OR LEAK PROCEDURE *****
ENVIRONMENTAL IMPACT:

REPORT SPILLS AS REQUIRED TO APPROPRIATE AUTHORITIES. U. S. COAST GUARD REGULATIONS REQUIRE IMMEDIATE REPORTING OF SPILLS THAT COULD REACH ANY WATERWAY INCLUDING INTERMITTENT DRY CREEKS. REPORT SPILL TO COAST GUARD TOLL FREE NUMBER 800-424-8802.

PROCEDURES IF MATERIAL IS RELEASED OR SPILLED:

ADSORB ON FIRE RETARDANT TREATED SANDUST, DIATOMACEOUS EARTH, ETC. SHOVEL UP AND DISPOSE OF AT AN APPROPRIATE WASTE DISPOSAL FACILITY IN ACCORDANCE WITH CURRENT APPLICABLE LAWS AND REGULATIONS, AND PRODUCT CHARACTERISTICS AT TIME OF DISPOSAL.

WASTE MANAGEMENT:

DISSOLVE WASTE IN A SOLVENT AND DISPOSE BY SUPERVISED INCINERATION IN COMPLIANCE WITH APPLICABLE LAWS AND REGULATIONS.

***** SPECIAL PROTECTION INFORMATION *****
EYE PROTECTION:

NO SPECIAL EQUIPMENT REQUIRED.

SKIN PROTECTION:

NO SPECIAL EQUIPMENT REQUIRED. HOWEVER, GOOD PERSONAL HYGIENE PRACTICES SHOULD ALWAYS BE FOLLOWED.

RESPIRATORY PROTECTION:

NO SPECIAL REQUIREMENTS UNDER ORDINARY CONDITIONS OF USE AND WITH ADEQUATE VENTILATION.

VENTILATION:

NO SPECIAL REQUIREMENTS UNDER ORDINARY CONDITIONS OF USE AND WITH ADEQUATE VENTILATION.

OTHER:

***** SPECIAL PRECAUTIONS *****
HANDLING: NO SPECIAL PRECAUTIONS REQUIRED.

***** TOXICOLOGICAL DATA *****

ACUTE

ORAL TOXICITY: (RATS)

LD50: > 15 G/KG NONTOXIC(ESTIMATED) ---BASED ON TESTING OF
SIMILAR PRODUCTS AND/OR THE COMPONENTS.

DERMAL TOXICITY: (RABBITS)

LD50: > 5 G/KG NONTOXIC(ESTIMATED) ---BASED ON TESTING OF SIMILAR
PRODUCTS AND/OR THE COMPONENTS.

INHALATION TOXICITY: (RATS)

NOT APPLICABLE ---HARMFUL CONCENTRATIONS OF MISTS AND/OR VAPORS
ARE UNLIKELY TO BE ENCOUNTERED THROUGH ANY CUSTOMARY OR REASONABLY
FORESEEABLE HANDLING, USE, OR MISUSE OF THIS PRODUCT.

EYE IRRITATION: (RABBITS)

EXPECTED TO BE NON-IRRITATING. ---BASED ON TESTING OF SIMILAR
PRODUCTS AND/OR THE COMPONENTS.

SKIN IRRITATION: (RABBITS)

EXPECTED TO BE NON-IRRITATING. ---BASED ON TESTING OF SIMILAR
PRODUCTS AND/OR THE COMPONENTS.

SUBACUTE AND MUTAGENICITY (SUMMARY)

CHRONIC OR SPECIALIZED (SUMMARY)

OTHER DATA

FILE CODES:

(FILL NO: T30041002) MHC: 0* 0* NA 0* 0* US82-150NONE
8307

ENVIRONMENTAL AFFAIRS AND TOXICOLOGY DEPT.
MANAGER OF PRODUCT SAFETY INFORMATION, PHONE:(212)883-5594

APPROVE

REVISED:
9/28/82

MOBIL MATERIAL SAFETY DATA BULLETIN

MOBIL OIL CORPORATION
ENVIRONMENTAL AFFAIRS AND TOXICOLOGY DEPT.

150 EAST 42ND STREET
NEW YORK, N.Y. 10017 (USA)

***** PRODUCT IDENTIFICATION *****
RUBREX 200

SUPPLIER:
MOBIL OIL CORP.
CHEMICAL NAMES AND SYNONYMS:
PET. HYDROCARBONS AND ADDITIVES
USE OR DESCRIPTION:
LUBRICANT

HEALTH EMERGENCY TELEPHONE:
(212) 883-4411
TRANSPORT EMERGENCY TELEPHONE:
(800) 424-9300 (CHEMTREC)
OTHER DESIGNATION:
(TRN 621888)

***** TYPICAL CHEMICAL AND PHYSICAL PROPERTIES *****

APPEARANCE:	VISCOSITY: AT 100 F, SUS	AT 40 C, CS
ASTM 2.9 LIQUID	200.0	37.0
ODOR:	VISCOSITY: AT 210 F, SUS	AT 100 C, CS
MILD	46.0	5.9
RELATIVE DENSITY: 15/4 C	SOLUBILITY IN WATER:	PH:
0.875	NEGLIGIBLE	NA
MELTING POINT: F(C)	POUR POINT: F(C)	
NA	20(-7)	
BOILING POINT: F(C)	FLASH POINT: F(C) (METHOD)	
>600(316)	>410(210) (ASTM D-92)	
VAPOR PRESSURE:MM HG 20C		
< .1		

NA=NOT APPLICABLE NE=NOT ESTABLISHED D=DECOMPOSES

***** INGREDIENTS *****

WT PCT	TLV(TWA):	MG/M3	PPM
(APPROX)			

HAZARDOUS INGREDIENTS:
NONE

NON-HAZARDOUS INGREDIENTS:
REFINED MINERAL OILS > 95
ADDITIVES AND/OR OTHER INGREDIENTS < 5

NOTE: TLVS SHOWN FOR GUIDANCE ONLY. FOLLOW APPLICABLE REGULATIONS.

INFORMATION GIVEN HEREIN IS OFFERED IN GOOD FAITH AS ACCURATE, BUT WITHOUT GUARANTEE. CONDITIONS OF USE AND SUITABILITY OF THE PRODUCT FOR PARTICULAR USES ARE BEYOND OUR CONTROL; ALL RISKS OF USE OF THE PRODUCT ARE THEREFORE ASSUMED BY THE USER AND WE EXPRESSLY DISCLAIM ALL WARRANTIES OF EVERY KIND AND NATURE, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE IN RESPECT TO THE USE OR SUITABILITY OF THE PRODUCT. NOTHING IS INTENDED AS A RECOMMENDATION FOR USES WHICH INFRINGE VALID PATENTS OR AS EXTENDING LICENSE UNDER VALID PATENTS. APPROPRIATE WARNINGS AND SAFE HANDLING PROCEDURES SHOULD BE PROVIDED TO HANDLERS AND USERS.

***** FIRE AND EXPLOSION HAZARD DATA *****

FLASH POINT: F(C) (METHOD) FLAMMABLE LIMITS: LEL UEL
> 410(210) (ASTM D-92) .6 7.0

EXTINGUISHING MEDIA:

CARBON DIOXIDE, FOAM, DRY CHEMICAL AND WATER FOG.

SPECIAL FIRE FIGHTING PROCEDURES:

FIREFIGHTERS MUST USE SELF-CONTAINED BREATHING APPARATUS.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

NONE

***** HEALTH HAZARD DATA *****

THRESHOLD LIMIT VALUE: (IF ESTABLISHED)

EFFECTS OF OVEREXPOSURE:

SLIGHT SKIN IRRITATION.

***** EMERGENCY AND FIRST AID PROCEDURES *****

EYE CONTACT:

FLUSH WITH WATER.

SKIN CONTACT:

WASH CONTACT AREAS WITH SOAP AND WATER.

INHALATION:

NOT EXPECTED TO BE A PROBLEM.

INGESTION:

NOT EXPECTED TO BE A PROBLEM WHEN INGESTED. IF UNCOMFORTABLE
SEEK MEDICAL ASSISTANCE. DO NOT INDUCE VOMITING. (NOTE TO PHYSICIAN:
MATERIAL IF ASPIRATED INTO THE LUNGS MAY CAUSE CHEMICAL PNEUMONITIS.
TREAT APPROPRIATELY)

***** REACTIVITY DATA *****

STABILITY: (THERMAL, LIGHT, ETC.) CONDITIONS TO AVOID:

STABLE EXTREME HEAT

INCOMPATIBILITY: (MATERIALS TO AVOID)

STRONG OXIDIZERS

HAZARDOUS DECOMPOSITION PRODUCTS:

CARBON MONOXIDE.

HAZARDOUS POLYMERIZATION:

WILL NOT OCCUR

CONDITIONS TO AVOID:

***** SPILL OR LEAK PROCEDURE *****
ENVIRONMENTAL IMPACT:

REPORT SPILLS AS REQUIRED TO APPROPRIATE AUTHORITIES. U. S. COAST GUARD REGULATIONS REQUIRE IMMEDIATE REPORTING OF SPILLS THAT COULD REACH ANY WATERWAY INCLUDING INTERMITTENT DRY CREEKS. REPORT SPILL TO COAST GUARD TOLL FREE NUMBER 800-424-8802.

PROCEDURES IF MATERIAL IS RELEASED OR SPILLED:

ADSORB ON FIRE RETARDANT TREATED SAWDUST, DIATOMACEOUS EARTH, ETC. SHOVEL UP AND DISPOSE OF AT AN APPROPRIATE WASTE DISPOSAL FACILITY IN ACCORDANCE WITH CURRENT APPLICABLE LAWS AND REGULATIONS, AND PRODUCT CHARACTERISTICS AT TIME OF DISPOSAL.

WASTE MANAGEMENT:

DISSOLVE WASTE IN A SOLVENT AND DISPOSE BY SUPERVISED INCINERATION IN COMPLIANCE WITH APPLICABLE LAWS AND REGULATIONS.

***** SPECIAL PROTECTION INFORMATION *****

EYE PROTECTION:

NO SPECIAL EQUIPMENT REQUIRED.

SKIN PROTECTION:

NO SPECIAL EQUIPMENT REQUIRED. HOWEVER, GOOD PERSONAL HYGIENE PRACTICES SHOULD ALWAYS BE FOLLOWED.

RESPIRATORY PROTECTION:

NO SPECIAL REQUIREMENTS UNDER ORDINARY CONDITIONS OF USE AND WITH ADEQUATE VENTILATION.

VENTILATION:

NO SPECIAL REQUIREMENTS UNDER ORDINARY CONDITIONS OF USE AND WITH ADEQUATE VENTILATION.

OTHER:

***** SPECIAL PRECAUTIONS *****

HANDLING: NO SPECIAL PRECAUTIONS REQUIRED.

***** TOXICOLOGICAL DATA *****

ACUTE

ORAL TOXICITY: (RATS)

LD50: > 15 G/KG NONTOXIC(ESTIMATED) ---BASED ON TESTING OF
SIMILAR PRODUCTS AND/OR THE COMPONENTS.

DERMAL TOXICITY: (RABBITS)

LD50: > 8 G/KG NONTOXIC(ESTIMATED) ---BASED ON TESTING OF SIMILAR
PRODUCTS AND/OR THE COMPONENTS.

INHALATION TOXICITY: (RATS)

NOT APPLICABLE ---HARMFUL CONCENTRATIONS OF MISTS AND/OR VAPORS
ARE UNLIKELY TO BE ENCOUNTERED THROUGH ANY CUSTOMARY OR REASONABLY
FORESEEABLE HANDLING, USE, OR MISUSE OF THIS PRODUCT.

EYE IRRITATION: (RABBITS)

EXPECTED TO BE NON-IRRITATING. ---BASED ON TESTING OF SIMILAR
PRODUCTS AND/OR THE COMPONENTS.

SKIN IRRITATION: (RABBITS)

MAY CAUSE SLIGHT IRRITATION ON PROLONGED OR REPEATED CONTACT.
---BASED ON TESTING OF SIMILAR PRODUCTS AND/OR THE COMPONENTS.

SUBACUTE AND MUTAGENICITY (SUMMARY)

CHRONIC OR SPECIALIZED (SUMMARY)

OTHER DATA

FILE CODES:

(FILL NO: TSD044001) MHC: 0* 0* NA 0* 1* US82-062NONE
8215

ENVIRONMENTAL AFFAIRS AND TOXICOLOGY DEPT.

MANAGER OF PRODUCT SAFETY INFORMATION, PHONE:(212)883-5594

APPROVE

REVISED:

6/28/82

MOBIL MATERIAL SAFETY DATA BULLETIN

MOBIL OIL CORPORATION
ENVIRONMENTAL AFFAIRS AND TOXICOLOGY DEPT.

150 EAST 42ND STREET
NEW YORK, N.Y. 10017 (USA)

***** PRODUCT IDENTIFICATION *****
MOBILMET OMICRON

SUPPLIER:
MOBIL OIL CORP.
CHEMICAL NAMES AND SYNONYMS:
PET. HYDROCARBONS AND ADDITIVES
USE OR DESCRIPTION:
CUTTING FLUID

HEALTH EMERGENCY TELEPHONE:
(212)883-4411
TRANSPORT EMERGENCY TELEPHONE:
(800)424-9300 (CHEMTREC)
OTHER DESIGNATION:
(TRN 665547)

***** TYPICAL CHEMICAL AND PHYSICAL PROPERTIES *****

APPEARANCE:	VISCOSITY: AT 100 F, SUS	AT 40 C, CS
ASTM D.5 LIQUID	138.0	24.6
ODOR:	VISCOSITY: AT 210 F, SUS	AT 100 C, CS
MILD	42.0	4.9
RELATIVE DENSITY: 15/4 C.	SOLUBILITY IN WATER:	PH:
0.865	NEGLIGIBLE	NA
MELTING POINT: F(C)	POUR POINT: F(C)	
NA	30 (-1)	
BOILING POINT: F(C)	FLASH POINT: F(C) (METHOD)	
>600 (316)	>365 (185) (ASTM D-92)	
VAPOR PRESSURE:MM HG 20C		
< .1		

NA=NOT APPLICABLE NE=NOT ESTABLISHED D=DECOMPOSES

***** INGREDIENTS *****

WT PCT	TLV(TWA):	MG/M3	PPM
(APPROX)			

HAZARDOUS INGREDIENTS:
NONE

NON-HAZARDOUS INGREDIENTS:
REFINED MINERAL OILS > 95
ADDITIVES AND/OR OTHER INGREDIENTS < 5

NOTE: TLVS SHOWN FOR GUIDANCE ONLY. FOLLOW APPLICABLE REGULATIONS.

INFORMATION GIVEN HEREIN IS OFFERED IN GOOD FAITH AS ACCURATE, BUT WITHOUT GUARANTEE. CONDITIONS OF USE AND SUITABILITY OF THE PRODUCT FOR PARTICULAR USES ARE BEYOND OUR CONTROL; ALL RISKS OF USE OF THE PRODUCT ARE THEREFORE ASSUMED BY THE USER AND WE EXPRESSLY DISCLAIM ALL WARRANTIES OF EVERY KIND AND NATURE, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE IN RESPECT TO THE USE OR SUITABILITY OF THE PRODUCT. NOTHING IS INTENDED AS A RECOMMENDATION FOR USES WHICH INFRINGE VALID PATENTS OR AS EXTENDING LICENSE UNDER VALID PATENTS. APPROPRIATE WARNINGS AND SAFE HANDLING PROCEDURES SHOULD BE PROVIDED TO HANDLERS AND USERS.

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR	CONDITIONS TO AVOID:
---	----------------------

***** SPILL OR LEAK PROCEDURE *****
ENVIRONMENTAL IMPACT:

REPORT SPILLS AS REQUIRED TO APPROPRIATE AUTHORITIES. U. S. COAST GUARD REGULATIONS REQUIRE IMMEDIATE REPORTING OF SPILLS THAT COULD REACH ANY WATERWAY INCLUDING INTERMITTENT DRY CREEKS. REPORT SPILL TO COAST GUARD TOLL FREE NUMBER 800-424-8802.

PROCEDURES IF MATERIAL IS RELEASED OR SPILLED:

ADSORB ON FIRE RETARDANT TREATED SAWDUST, DIATOMACEOUS EARTH, ETC. SHOVEL UP AND DISPOSE OF AT AN APPROPRIATE WASTE DISPOSAL FACILITY IN ACCORDANCE WITH CURRENT APPLICABLE LAWS AND REGULATIONS, AND PRODUCT CHARACTERISTICS AT TIME OF DISPOSAL.

WASTE MANAGEMENT:

DISSOLVE WASTE IN A SOLVENT AND DISPOSE BY SUPERVISED INCINERATION IN COMPLIANCE WITH APPLICABLE LAWS AND REGULATIONS.

***** SPECIAL PROTECTION INFORMATION *****

EYE PROTECTION:

NO SPECIAL EQUIPMENT REQUIRED.

SKIN PROTECTION:

NO SPECIAL EQUIPMENT REQUIRED. HOWEVER, GOOD PERSONAL HYGIENE PRACTICES SHOULD ALWAYS BE FOLLOWED.

RESPIRATORY PROTECTION:

NO SPECIAL REQUIREMENTS UNDER ORDINARY CONDITIONS OF USE AND WITH ADEQUATE VENTILATION.

VENTILATION:

NO SPECIAL REQUIREMENTS UNDER ORDINARY CONDITIONS OF USE AND WITH ADEQUATE VENTILATION.

OTHER:

***** SPECIAL PRECAUTIONS *****

HANDLING: NO SPECIAL PRECAUTIONS REQUIRED.

***** TOXICOLOGICAL DATA *****

ACUTE

ORAL TOXICITY: (RATS)

LD50: > 5 G/KG SLIGHTLY TOXIC (ESTIMATED) ---BASED ON TESTING OF SIMILAR PRODUCTS AND/OR THE COMPONENTS.

DERMAL TOXICITY: (RABBITS)

LD50: > 5 G/KG NONTOXIC (ESTIMATED) ---BASED ON TESTING OF SIMILAR PRODUCTS AND/OR THE COMPONENTS.

INHALATION TOXICITY: (RATS)

LC50: > 5 MG/L FOR 4 HRS. 0/10 RATS DIED AT THIS DOSAGE LEVEL. NONTOXIC (ESTIMATED) ---BASED ON TESTING OF SIMILAR PRODUCTS AND/OR THE COMPONENTS.

EYE IRRITATION: (RABBITS)

CAUSED NO SIGNIFICANT IRRITATION TO RABBITS. EYE IRRITATION SCORES: 1.5 AT 1 HOUR, 0 AT 24 HOURS, 0 AT 48 HOURS, 0 AT 72 HOURS, 0 AT 4 DAYS, 0 AT 7 DAYS.

SKIN IRRITATION: (RABBITS)

SLIGHTLY IRRITATING TO RABBITS. PRIMARY IRRITATION SCORE: .9/8

SUBACUTE AND MUTAGENICITY (SUMMARY)

CHRONIC OR SPECIALIZED (SUMMARY)

OTHER DATA

*****THIS MIXTURE OR A SIMILAR MIXTURE DID NOT RESULT IN ANY FATALITIES TO RATS AT CONCENTRATIONS (SEE INHALATION TOXICITY ABOVE) SUBSTANTIALLY HIGHER THAN THE 5 MG/M3 TLV SUGGESTED FOR OIL MISTS.

FILE CODES:

(FILL NO: RJ126A212) MHC: 1* 0* 0* 0 1 US83-003NONE
8504

ENVIRONMENTAL AFFAIRS AND TOXICOLOGY DEPT.

MANAGER OF PRODUCT SAFETY INFORMATION, PHONE: (212) 883-5594

APPROVE

REVISED:

4/13/83

MOBIL MATERIAL SAFETY DATA BULLETIN

MOBIL OIL CORPORATION
ENVIRONMENTAL AFFAIRS AND TOXICOLOGY DEPT.

150 EAST 42ND STREET
NEW YORK, N.Y. 10017 (USA)

***** PRODUCT IDENTIFICATION *****
MOBILMET UPSILON

SUPPLIER:
MOBIL OIL CORP.
CHEMICAL NAMES AND SYNONYMS:
PET. HYDROCARBONS AND ADDITIVES
USE OR DESCRIPTION:
CUTTING FLUID

HEALTH EMERGENCY TELEPHONE:
(212) 863-4411
TRANSPORT EMERGENCY TELEPHONE:
(800) 424-9300 (CHEMTREC)
OTHER DESIGNATION:
(TRN 665554)

***** TYPICAL CHEMICAL AND PHYSICAL PROPERTIES *****

APPEARANCE:	VISCOSITY: AT 100 F, SUS	AT 40 C, CS
ASTM 5.0 LIQUID	62.0	10.2
ODOR:	VISCOSITY: AT 210 F, SUS	AT 100 C, CS
MILD	35.1	2.7
RELATIVE DENSITY: 15/4 C	SOLUBILITY IN WATER:	PH:
0.849	NEGLECTIBLE	NA
MELTING POINT: F(C)	POUR POINT: F(C)	
NA	30(-1)	
BOILING POINT: F(C)	FLASH POINT: F(C) (METHOD)	
>600(316)	>325(163) (ASTM D-92)	
VAPOR PRESSURE:MM HG 20C		
< .1		

NA=NOT APPLICABLE NE=NOT ESTABLISHED D=DECOMPOSES.

***** INGREDIENTS *****

	WT PCT (APPROX)	TLV(TWA):	MG/M3	PPM
HAZARDOUS INGREDIENTS:				
NONE				
NON-HAZARDOUS INGREDIENTS:				
REFINED MINERAL OILS	> 95			
ADDITIVES AND/OR OTHER INGREDIENTS.	< 5			

NOTE: TLVS SHOWN FOR GUIDANCE ONLY. FOLLOW APPLICABLE REGULATIONS.

INFORMATION GIVEN HEREIN IS OFFERED IN GOOD FAITH AS ACCURATE, BUT WITHOUT GUARANTEE. CONDITIONS OF USE AND SUITABILITY OF THE PRODUCT FOR PARTICULAR USES ARE BEYOND OUR CONTROL; ALL RISKS OF USE OF THE PRODUCT ARE THEREFORE ASSUMED BY THE USER AND WE EXPRESSLY DISCLAIM ALL WARRANTIES OF EVERY KIND AND NATURE, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE IN RESPECT TO THE USE OR SUITABILITY OF THE PRODUCT. NOTHING IS INTENDED AS A RECOMMENDATION FOR USES WHICH INFRINGE VALID PATENTS OR AS EXTENDING LICENSE UNDER VALID PATENTS. APPROPRIATE WARNINGS AND SAFE HANDLING PROCEDURES SHOULD BE PROVIDED TO HANDLERS AND USERS.

***** FIRE AND EXPLOSION HAZARD DATA *****

FLASH POINT: F(C) (METHOD) FLAMMABLE LIMITS: LEL UEL
 > 325(163) (ASTM D-92) .6 7.0

EXTINGUISHING MEDIA:

CARBON DIOXIDE, FOAM, DRY CHEMICAL AND WATER FOG.

SPECIAL FIRE FIGHTING PROCEDURES:

FIREFIGHTERS MUST USE SELF-CONTAINED BREATHING APPARATUS.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

NONE

***** HEALTH HAZARD DATA *****

THRESHOLD LIMIT VALUE: (IF ESTABLISHED)

5.00 MG/M3 SUGGESTED FOR OIL MIST

EFFECTS OF OVEREXPOSURE:

SLIGHT SKIN IRRITATION.

***** EMERGENCY AND FIRST AID PROCEDURES *****

EYE CONTACT:

FLUSH WITH WATER.

SKIN CONTACT:

WASH CONTACT AREAS WITH SOAP AND WATER.

INHALATION:

NOT EXPECTED TO BE A PROBLEM.

INGESTION:

DO NOT INDUCE VOMITING. ADMINISTER VEGETABLE OIL. GET MEDICAL ASSISTANCE. (NOTE TO PHYSICIAN: MATERIAL IF ASPIRATED INTO THE LUNGS MAY CAUSE CHEMICAL PNEUMONITIS. TREAT APPROPRIATELY)

***** REACTIVITY DATA *****

STABILITY: (THERMAL, LIGHT, ETC.) CONDITIONS TO AVOID:

STABLE EXTREME HEAT

INCOMPATIBILITY: (MATERIALS TO AVOID)

STRONG OXIDIZERS

HAZARDOUS DECOMPOSITION PRODUCTS:

CARBON MONOXIDE.

HAZARDOUS POLYMERIZATION:

WILL NOT OCCUR

CONDITIONS TO AVOID:

***** SPILL OR LEAK PROCEDURE *****
ENVIRONMENTAL IMPACT:

REPORT SPILLS AS REQUIRED TO APPROPRIATE AUTHORITIES. U. S. COAST GUARD REGULATIONS REQUIRE IMMEDIATE REPORTING OF SPILLS THAT COULD REACH ANY WATERWAY INCLUDING INTERMITTENT DRY CREEKS. REPORT SPILL TO COAST GUARD TOLL FREE NUMBER 800-424-8802.

PROCEDURES IF MATERIAL IS RELEASED OR SPILLED:

ABSORB ON FIRE RETARDANT TREATED SAWDUST, DIATOMACEOUS EARTH, ETC. SHOVEL UP AND DISPOSE OF AT AN APPROPRIATE WASTE DISPOSAL FACILITY IN ACCORDANCE WITH CURRENT APPLICABLE LAWS AND REGULATIONS, AND PRODUCT CHARACTERISTICS AT TIME OF DISPOSAL.

WASTE MANAGEMENT:

DISPOSE OF WASTE BY SUPERVISED INCINERATION IN COMPLIANCE WITH APPLICABLE LAWS AND REGULATIONS.

***** SPECIAL PROTECTION INFORMATION *****

EYE PROTECTION:

NO SPECIAL EQUIPMENT REQUIRED.

SKIN PROTECTION:

NO SPECIAL EQUIPMENT REQUIRED. HOWEVER, GOOD PERSONAL HYGIENE PRACTICES SHOULD ALWAYS BE FOLLOWED.

RESPIRATORY PROTECTION:

NO SPECIAL REQUIREMENTS UNDER ORDINARY CONDITIONS OF USE AND WITH ADEQUATE VENTILATION.

VENTILATION:

NO SPECIAL REQUIREMENTS UNDER ORDINARY CONDITIONS OF USE AND WITH ADEQUATE VENTILATION.

OTHER:

***** SPECIAL PRECAUTIONS *****

HANDLING: NO SPECIAL PRECAUTIONS REQUIRED.

STORAGE: SEE APPENDIX FOR PRECAUTIONARY LABEL. L99

***** TOXICOLOGICAL DATA *****

ACUTE

ORAL TOXICITY: (RATS)

LD50: > 5 G/KG SLIGHTLY TOXIC (ESTIMATED) ---BASED ON TESTING OF
SIMILAR PRODUCTS AND/OR THE COMPONENTS.

DERMAL TOXICITY: (RABBITS)

LD50: > 2 G/KG SLIGHTLY TOXIC (ESTIMATED) ---BASED ON TESTING OF
SIMILAR PRODUCTS AND/OR THE COMPONENTS.

INHALATION TOXICITY: (RATS)

LC50: > 5 MG/L FOR 4 HRS. 0/10 RATS DIED AT THIS DOSAGE LEVEL.
PRACTICALLY NONTOXIC

EYE IRRITATION: (RABBITS)

CAUSED NO SIGNIFICANT IRRITATION TO RABBITS. EYE IRRITATION SCORES:
2.3 AT 1 HOUR, 0.1 AT 24 HOURS, 0 AT 7 DAYS.

SKIN IRRITATION: (RABBITS)

SLIGHTLY IRRITATING TO RABBITS. PRIMARY IRRITATION SCORE: 1.6/8

SUBACUTE AND MUTAGENICITY (SUMMARY)

CHRONIC OR SPECIALIZED (SUMMARY)

OTHER DATA

****THIS MIXTURE OR A SIMILAR MIXTURE DID NOT RESULT IN ANY
FATALITIES TO RATS AT CONCENTRATIONS (SEE INHALATION TOXICITY ABOVE)
SUBSTANTIALLY HIGHER THAN THE 5 MG/M3 TLV SUGGESTED FOR OIL MISTS.

FILE CODES:

(FILL NO: RJ130A201) MHC: 1* 1* 0 0 1 US83-003NONE
8504

APPROVE

ENVIRONMENTAL AFFAIRS AND TOXICOLOGY DEPT.

REVISED:

MANAGER OF PRODUCT SAFETY INFORMATION, PHONE: (212) 883-5594

4/13/83

APPENDIX

PRECAUTIONARY LABEL TEXT FOR PACKAGED PRODUCTS

CUTTING FLUID
FOR METAL PROCESSING ONLY

CAUTION.

AVOID PROLONGED OR REPEATED
SKIN CONTACT.

WASH SKIN THOROUGHLY WITH
SOAP AND WATER AFTER
PROLONGED CONTACT.

AVOID WEARING OF CLOTHING
SOAKED WITH FLUID.

AVOID INHALATION OF MIST
OR VAPOR.

FOR INDUSTRIAL USE ONLY

MOBIL OIL CORPORATION NEW YORK NY L-99(10-69)

MOBIL MATERIAL SAFETY DATA BULLETIN

MOBIL OIL CORPORATION
ENVIRONMENTAL AFFAIRS AND TOXICOLOGY DEPT.

150 EAST 42ND STREET
NEW YORK, N.Y. 10017 (USA)

***** PRODUCT IDENTIFICATION *****
VACMUL A6

SUPPLIER:	HEALTH EMERGENCY TELEPHONE:
MOBIL OIL CORP.	(212)883-4411
CHEMICAL NAMES AND SYNONYMS:	TRANSPORT EMERGENCY TELEPHONE:
PET. HYDROCARBONS AND ADDITIVES	(800)424-9300 (CHEMTREC)
USE OR DESCRIPTION:	OTHER DESIGNATION:
METAL PROCESSING OIL	(TRN 671859)

***** TYPICAL CHEMICAL AND PHYSICAL PROPERTIES *****

APPEARANCE:	VISCOSITY: AT 100 F, SUS	AT 40 C, CS
ASTM 5.1 LIQUID	275.0	42.0
ODOR:	VISCOSITY: AT 210 F, SUS	AT 100 C, CS
MILD	47.0	6.0
RELATIVE DENSITY: 15/4 C	SOLUBILITY IN WATER:	PH:
0.876	NEGLIGIBLE	NA
MELTING POINT: F(C)	POUR POINT: F(C)	
NA	25(-4)	
BOILING POINT: F(C)	FLASH POINT: F(C) (METHOD)	
>600(316)	>380(193) (ASTM D-92)	
VAPOR PRESSURE:MM HG 20C		
< .1		

NA=NOT APPLICABLE NE=NOT ESTABLISHED D=DECOMPOSES

***** INGREDIENTS *****

	WT PCT	TLV(TWA):	MG/M3	PPM
	(APPROX)			
HAZARDOUS INGREDIENTS:				
NONE				
NON-HAZARDOUS INGREDIENTS:				
REFINED MINERAL OILS	> 90			
ADDITIVES AND/OR OTHER INGREDIENTS.	< 10			
CHLORINATED PARAFFIN WAX	< 5			

NOTE: TLVS SHOWN FOR GUIDANCE ONLY. FOLLOW APPLICABLE REGULATIONS.

INFORMATION GIVEN HEREIN IS OFFERED IN GOOD FAITH AS ACCURATE, BUT WITHOUT GUARANTEE. CONDITIONS OF USE AND SUITABILITY OF THE PRODUCT FOR PARTICULAR USES ARE BEYOND OUR CONTROL; ALL RISKS OF USE OF THE PRODUCT ARE THEREFORE ASSUMED BY THE USER AND WE EXPRESSLY DISCLAIM ALL WARRANTIES OF EVERY KIND AND NATURE, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE IN RESPECT TO THE USE OR SUITABILITY OF THE PRODUCT. NOTHING IS INTENDED AS A RECOMMENDATION FOR USES WHICH INFRINGE VALID PATENTS OR AS EXTENDING LICENSE UNDER VALID PATENTS. APPROPRIATE WARNINGS AND SAFE HANDLING PROCEDURES SHOULD BE PROVIDED TO HANDLERS AND USERS.

***** FIRE AND EXPLOSION HAZARD DATA *****

FLASH POINT: F(C) (METHOD) FLAMMABLE LIMITS: LEL UEL
> 380(193) (ASTM D-92) .6 7.0

EXTINGUISHING MEDIA:

CARBON DIOXIDE, FOAM, DRY CHEMICAL AND WATER FOG.

SPECIAL FIRE FIGHTING PROCEDURES:

FIREFIGHTERS MUST USE SELF-CONTAINED BREATHING APPARATUS.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

NONE

***** HEALTH HAZARD DATA *****

THRESHOLD LIMIT VALUE: (IF ESTABLISHED)

5.00 MG/M3 SUGGESTED FOR OIL MIST

EFFECTS OF OVEREXPOSURE:

SLIGHT SKIN IRRITATION.

***** EMERGENCY AND FIRST AID PROCEDURES *****

EYE CONTACT:

FLUSH WITH WATER.

SKIN CONTACT:

WASH CONTACT AREAS WITH SOAP AND WATER.

INHALATION:

REMOVE FROM FURTHER EXPOSURE. IF UNCONSCIOUSNESS OCCURS, SEEK IMMEDIATE MEDICAL ASSISTANCE AND CALL A PHYSICIAN. IF BREATHING HAS STOPPED, USE MOUTH TO MOUTH RESUSCITATION.

INGESTION:

NOT EXPECTED TO BE A PROBLEM. HOWEVER, IF GREATER THAN 1/2 LITER(PINT) INGESTED, IMMEDIATELY GIVE 1 TO 2 GLASSES OF WATER AND CALL A PHYSICIAN, HOSPITAL EMERGENCY ROOM OR POISON CONTROL CENTER FOR ASSISTANCE. DO NOT INDUCE VOMITING OR GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON.

***** REACTIVITY DATA *****

STABILITY: (THERMAL, LIGHT, ETC.) CONDITIONS TO AVOID:

STABLE EXTREME HEAT

INCOMPATIBILITY: (MATERIALS TO AVOID)

STRONG OXIDIZERS

HAZARDOUS DECOMPOSITION PRODUCTS:

CARBON MONOXIDE.

HAZARDOUS POLYMERIZATION:

WILL NOT OCCUR

CONDITIONS TO AVOID:

***** SPILL OR LEAK PROCEDURE *****
ENVIRONMENTAL IMPACT:

REPORT SPILLS AS REQUIRED TO APPROPRIATE AUTHORITIES. U. S. COAST GUARD REGULATIONS REQUIRE IMMEDIATE REPORTING OF SPILLS THAT COULD REACH ANY WATERWAY INCLUDING INTERMITTENT DRY CREEKS. REPORT SPILL TO COAST GUARD TOLL FREE NUMBER 800-424-8802.

PROCEDURES IF MATERIAL IS RELEASED OR SPILLED:

ABSORB ON FIRE RETARDANT TREATED SAWDUST, DIATOMACEOUS EARTH, ETC. SHOVEL UP AND DISPOSE OF AT AN APPROPRIATE WASTE DISPOSAL FACILITY IN ACCORDANCE WITH CURRENT APPLICABLE LAWS AND REGULATIONS, AND PRODUCT CHARACTERISTICS AT TIME OF DISPOSAL.

WASTE MANAGEMENT:

DISSOLVE WASTE IN A SOLVENT AND DISPOSE BY SUPERVISED INCINERATION IN COMPLIANCE WITH APPLICABLE LAWS AND REGULATIONS.

***** SPECIAL PROTECTION INFORMATION *****
EYE PROTECTION:

NO SPECIAL EQUIPMENT REQUIRED.

SKIN PROTECTION:

NO SPECIAL EQUIPMENT REQUIRED. HOWEVER, GOOD PERSONAL HYGIENE PRACTICES SHOULD ALWAYS BE FOLLOWED.

RESPIRATORY PROTECTION:

NO SPECIAL REQUIREMENTS UNDER ORDINARY CONDITIONS OF USE AND WITH ADEQUATE VENTILATION.

VENTILATION:

NO SPECIAL REQUIREMENTS UNDER ORDINARY CONDITIONS OF USE AND WITH ADEQUATE VENTILATION.

OTHER:

***** SPECIAL PRECAUTIONS *****
HANDLING: NO SPECIAL PRECAUTIONS REQUIRED.

***** TOXICOLOGICAL DATA *****

ACUTE

ORAL TOXICITY: (RATS)

SLIGHTLY TOXIC (ESTIMATED) ---BASED ON TESTING OF SIMILAR PRODUCTS
AND/OR THE COMPONENTS.

DERMAL TOXICITY: (RABBITS)

SLIGHTLY TOXIC (ESTIMATED) ---BASED ON TESTING OF SIMILAR PRODUCTS
AND/OR THE COMPONENTS.

INHALATION TOXICITY: (RATS)

NOT ESTABLISHED

EYE IRRITATION: (RABBITS)

EXPECTED TO BE NON-IRRITATING. ---BASED ON TESTING OF SIMILAR
PRODUCTS AND/OR THE COMPONENTS.

SKIN IRRITATION: (RABBITS)

MAY CAUSE SLIGHT IRRITATION ON PROLONGED OR REPEATED CONTACT.
---BASED ON TESTING OF SIMILAR PRODUCTS AND/OR THE COMPONENTS.

SUBACUTE AND MUTAGENICITY (SUMMARY)

CHRONIC OR SPECIALIZED (SUMMARY)

OTHER DATA

FILE CODES:

(FILL NO: TSD094

) MHC: 1* 1* NE 0* 1*

US82-107NONE

APPROVE

8293

ENVIRONMENTAL AFFAIRS AND TOXICOLOGY DEPT.

MANAGER OF PRODUCT SAFETY INFORMATION, PHONE: (212) 883-5594

REVISED:

9/14/82

MOBIL MATERIAL SAFETY DATA BULLETIN

MOBIL OIL CORPORATION
ENVIRONMENTAL AFFAIRS AND TOXICOLOGY DEPT.

150 EAST 42ND STREET
NEW YORK, N.Y. 10017 (USA)

***** PRODUCT IDENTIFICATION *****
MOBILTHERM 603

SUPPLIER:
MOBIL OIL CORP.
CHEMICAL NAMES AND SYNONYMS:
PETROLEUM HYDROCARBONS
USE OR DESCRIPTION:
HEAT TRANSFER OIL

HEALTH EMERGENCY TELEPHONE:
(212)883-4411
TRANSPORT EMERGENCY TELEPHONE:
(800)424-9330 (CHEMTREC)
OTHER DESIGNATION:
(TRN 680512)

***** TYPICAL CHEMICAL AND PHYSICAL PROPERTIES *****

APPEARANCE:	VISCOSITY: AT 100 F, SUS	AT 40 C, CS
ASTM 2.0 LIQUID	105.0	20.0
ODOR:	VISCOSITY: AT 210 F, SUS	AT 100 C, CS
MILD	40.0	4.1
RELATIVE DENSITY: 15/4 C	SOLUBILITY IN WATER:	PH:
0.865	NEGLECTIBLE	NA
MELTING POINT: F(C)	POUR POINT: F(C)	
NA	20(-7)	
BOILING POINT: F(C)	FLASH POINT: F(C) (METHOD)	
>600(316)	390(193) (ASTM D-92)	
VAPOR PRESSURE:MM HG 20C		
< .1		

NA=NOT APPLICABLE NE=NOT ESTABLISHED D=DECOMPOSES

***** INGREDIENTS *****

	WT PCT (APPROX)	TLV(TWA):	MG/M3	PPM
HAZARDOUS INGREDIENTS:				
NONE				
NON-HAZARDOUS INGREDIENTS:				
REFINED MINERAL OILS	100			

NOTE: TLVS SHOWN FOR GUIDANCE ONLY. FOLLOW APPLICABLE REGULATIONS.

INFORMATION GIVEN HEREIN IS OFFERED IN GOOD FAITH AS ACCURATE, BUT WITHOUT GUARANTEE. CONDITIONS OF USE AND SUITABILITY OF THE PRODUCT FOR PARTICULAR USES ARE BEYOND OUR CONTROL; ALL RISKS OF USE OF THE PRODUCT ARE THEREFORE ASSUMED BY THE USER AND WE EXPRESSLY DISCLAIM ALL WARRANTIES OF EVERY KIND AND NATURE, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE IN RESPECT TO THE USE OR SUITABILITY OF THE PRODUCT. NOTHING IS INTENDED AS A RECOMMENDATION FOR USES WHICH INFRINGE VALID PATENTS OR AS EXTENDING LICENSE UNDER VALID PATENTS. APPROPRIATE WARNINGS AND SAFE HANDLING PROCEDURES SHOULD BE PROVIDED TO HANDLERS AND USERS.

***** FIRE AND EXPLOSION HAZARD DATA *****

FLASH POINT: F(C) (METHOD) FLAMMABLE LIMITS: LEL UEL
380(193) (ASTM D-92) .6 7.0

EXTINGUISHING MEDIA:

CARBON DIOXIDE, FOAM, DRY CHEMICAL AND WATER FOG.

SPECIAL FIRE FIGHTING PROCEDURES:

FIREFIGHTERS MUST USE SELF-CONTAINED BREATHING APPARATUS.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

NONE

***** HEALTH HAZARD DATA *****

THRESHOLD LIMIT VALUE: (IF ESTABLISHED)

5.00 MG/M3 SUGGESTED FOR OIL MIST

EFFECTS OF OVEREXPOSURE:

SLIGHT SKIN IRRITATION.

***** EMERGENCY AND FIRST AID PROCEDURES *****

EYE CONTACT:

FLUSH WITH WATER.

SKIN CONTACT:

WASH CONTACT AREAS WITH SOAP AND WATER.

INHALATION:

NOT EXPECTED TO BE A PROBLEM.

INGESTION:

NOT EXPECTED TO BE A PROBLEM WHEN INGESTED. IF UNCOMFORTABLE
SEEK MEDICAL ASSISTANCE.

***** REACTIVITY DATA *****

STABILITY: (THERMAL, LIGHT, ETC.) CONDITIONS TO AVOID:

STABLE STRONG OXIDATION

INCOMPATIBILITY: (MATERIALS TO AVOID)

STRONG OXIDIZERS

HAZARDOUS DECOMPOSITION PRODUCTS:

CARBON MONOXIDE.

HAZARDOUS POLYMERIZATION:

WILL NOT OCCUR

CONDITIONS TO AVOID:

***** SPILL OR LEAK PROCEDURE *****
ENVIRONMENTAL IMPACT:

REPORT SPILLS AS REQUIRED TO APPROPRIATE AUTHORITIES. U. S. COAST GUARD REGULATIONS REQUIRE IMMEDIATE REPORTING OF SPILLS THAT COULD REACH ANY WATERWAY INCLUDING INTERMITTENT DRY CREEKS. REPORT SPILL TO COAST GUARD TOLL FREE NUMBER 800-424-8802.

PROCEDURES IF MATERIAL IS RELEASED OR SPILLED:

ADSORB ON FIRE RETARDANT TREATED SAWDUST, DIATOMACEOUS EARTH, ETC. SHOVEL UP AND DISPOSE OF AT AN APPROPRIATE WASTE DISPOSAL FACILITY IN ACCORDANCE WITH CURRENT APPLICABLE LAWS AND REGULATIONS, AND PRODUCT CHARACTERISTICS AT TIME OF DISPOSAL.

WASTE MANAGEMENT:

DISPOSE OF WASTE BY SUPERVISED INCINERATION IN COMPLIANCE WITH APPLICABLE LAWS AND REGULATIONS.

***** SPECIAL PROTECTION INFORMATION *****

EYE PROTECTION:

NO SPECIAL EQUIPMENT REQUIRED.

SKIN PROTECTION:

NO SPECIAL EQUIPMENT REQUIRED. HOWEVER, GOOD PERSONAL HYGIENE PRACTICES SHOULD ALWAYS BE FOLLOWED.

RESPIRATORY PROTECTION:

NO SPECIAL REQUIREMENTS UNDER ORDINARY CONDITIONS OF USE AND WITH ADEQUATE VENTILATION.

VENTILATION:

NO SPECIAL REQUIREMENTS UNDER ORDINARY CONDITIONS OF USE AND WITH ADEQUATE VENTILATION.

OTHER:

***** SPECIAL PRECAUTIONS *****

HANDLING: NO SPECIAL PRECAUTIONS REQUIRED.

Mobil

MOBILTHERM 603

680512

PAGE 4

***** TOXICOLOGICAL DATA *****

ACUTE

ORAL TOXICITY: (RATS)

LD50: > 15 G/KG PRACTICALLY NONTOXIC

DERMAL TOXICITY: (RABBITS)

LD50: > 5 G/KG PRACTICALLY NONTOXIC

INHALATION TOXICITY: (RATS)

NOT APPLICABLE ---HARMFUL CONCENTRATIONS OF MISTS AND/OR VAPORS ARE UNLIKELY TO BE ENCOUNTERED THROUGH ANY CUSTOMARY OR REASONABLY FORESEEABLE HANDLING, USE, OR MISUSE OF THIS PRODUCT.

EYE IRRITATION: (RABBITS)

EXPECTED TO BE NON-IRRITATING. ---BASED ON TESTING OF SIMILAR PRODUCTS AND/OR THE COMPONENTS.

SKIN IRRITATION: (RABBITS)

MAY CAUSE SLIGHT IRRITATION ON PROLONGED OR REPEATED CONTACT.
---BASED ON TESTING OF SIMILAR PRODUCTS AND/OR THE COMPONENTS.

SUBACUTE AND MUTAGENICITY (SUMMARY)

CHRONIC OR SPECIALIZED (SUMMARY)

OTHER DATA

FILE CODES:

(FILL NO: MTN4604007) MHC: C C NA C* 1* US81-246E-188-78 APPROVE
8084

ENVIRONMENTAL AFFAIRS AND TOXICOLOGY DEPT.

REVISED:

MANAGER OF PRODUCT SAFETY INFORMATION, PHONE: (212) 883-5594

2/17/82

MOBIL MATERIAL SAFETY DATA BULLETIN

MOBIL OIL CORPORATION
ENVIRONMENTAL AFFAIRS AND TOXICOLOGY DEPT.

150 EAST 42ND STREET
NEW YORK, N.Y. 10017 (USA)

***** PRODUCT IDENTIFICATION *****
RUBREX 100

SUPPLIER:
MOBIL OIL CORP.
CHEMICAL NAMES AND SYNONYMS:
PETROLEUM HYDROCARBONS
USE OR DESCRIPTION:
LUBRICANT

HEALTH EMERGENCY TELEPHONE:
(212) 883-4411
TRANSPORT EMERGENCY TELEPHONE:
(800) 424-9300 (CHEMTREC)
OTHER DESIGNATION:
(TRN 621847-34)

***** TYPICAL CHEMICAL AND PHYSICAL PROPERTIES *****

APPEARANCE:	VISCOSITY: AT 100 F, SUS	AT 40 C, CS
ASTM 2.0 LIQUID	195.0	20.5
ODOR:	VISCOSITY: AT 210 F, SUS	AT 100 C, CS
MILD	40.0	4.1
RELATIVE DENSITY: 15/4 C	SOLUBILITY IN WATER:	PH:
0.86	NEGLECTIBLE	NA
MELTING POINT: F(C)	POUR POINT: F(C)	
NA	20(-7)	
BOILING POINT: F(C)	FLASH POINT: F(C) (METHOD)	
>600(315)	>380(193) (ASTM D-92)	
VAPOR PRESSURE:MM HG 20C		
< .1		

NA=NOT APPLICABLE NE=NOT ESTABLISHED D=DECOMPOSES

***** INGREDIENTS *****

WT PCT	TLV(TWA):	MG/M3	PPM
(APPROX)			

HAZARDOUS INGREDIENTS:
NONE

NON-HAZARDOUS INGREDIENTS:
REFINED MINERAL OILS

100

NOTE: TLVS SHOWN FOR GUIDANCE ONLY. FOLLOW APPLICABLE REGULATIONS.

INFORMATION GIVEN HEREIN IS OFFERED IN GOOD FAITH AS ACCURATE, BUT WITHOUT GUARANTEE. CONDITIONS OF USE AND SUITABILITY OF THE PRODUCT FOR PARTICULAR USES ARE BEYOND OUR CONTROL; ALL RISKS OF USE OF THE PRODUCT ARE THEREFORE ASSUMED BY THE USER AND WE EXPRESSLY DISCLAIM ALL WARRANTIES OF EVERY KIND AND NATURE, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE IN RESPECT TO THE USE OR SUITABILITY OF THE PRODUCT. NOTHING IS INTENDED AS A RECOMMENDATION FOR USES WHICH INFRINGE VALID PATENTS OR AS EXTENDING LICENSE UNDER VALID PATENTS. APPROPRIATE WARNINGS AND SAFE HANDLING PROCEDURES SHOULD BE PROVIDED TO HANDLERS AND USERS.

***** FIRE AND EXPLOSION HAZARD DATA *****

FLASH POINT: F(C) (METHOD) FLAMMABLE LIMITS: LEL UEL
> 380(193) (ASTM D-92) .6 7.0

EXTINGUISHING MEDIA:

CARBON DIOXIDE, FOAM, DRY CHEMICAL AND WATER FOG.

SPECIAL FIRE FIGHTING PROCEDURES:

FIREFIGHTERS MUST USE SELF-CONTAINED BREATHING APPARATUS.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

NONE

***** HEALTH HAZARD DATA *****

THRESHOLD LIMIT VALUE: (IF ESTABLISHED)

EFFECTS OF OVEREXPOSURE:

SLIGHT SKIN IRRITATION.

***** EMERGENCY AND FIRST AID PROCEDURES *****

EYE CONTACT:

FLUSH WITH WATER.

SKIN CONTACT:

WASH CONTACT AREAS WITH SOAP AND WATER.

INHALATION:

NOT EXPECTED TO BE A PROBLEM.

INGESTION:

NOT EXPECTED TO BE A PROBLEM WHEN INGESTED. IF UNCOMFORTABLE SEEK MEDICAL ASSISTANCE. DO NOT INDUCE VOMITING. (NOTE TO PHYSICIAN: MATERIAL IF ASPIRATED INTO THE LUNGS MAY CAUSE CHEMICAL PNEUMONITIS. TREAT APPROPRIATELY)

***** REACTIVITY DATA *****

STABILITY: (THERMAL, LIGHT, ETC.) CONDITIONS TO AVOID:
STABLE EXTREME HEAT

INCOMPATIBILITY: (MATERIALS TO AVOID)

STRONG OXIDIZERS

HAZARDOUS DECOMPOSITION PRODUCTS:

CARBON MONOXIDE.

HAZARDOUS POLYMERIZATION:

WILL NOT OCCUR

CONDITIONS TO AVOID:

***** SPILL OR LEAK PROCEDURE *****
ENVIRONMENTAL IMPACT:

REPORT SPILLS AS REQUIRED TO APPROPRIATE AUTHORITIES. U. S. COAST GUARD REGULATIONS REQUIRE IMMEDIATE REPORTING OF SPILLS THAT COULD REACH ANY WATERWAY INCLUDING INTERMITTENT DRY CREEKS. REPORT SPILL TO COAST GUARD TOLL FREE NUMBER 800-424-8802.

PROCEDURES IF MATERIAL IS RELEASED OR SPILLED:

ADSORB ON FIRE RETARDANT TREATED SAWDUST, DIATOMACEOUS EARTH, ETC. SHOVEL UP AND DISPOSE OF AT AN APPROPRIATE WASTE DISPOSAL FACILITY IN ACCORDANCE WITH CURRENT APPLICABLE LAWS AND REGULATIONS, AND PRODUCT CHARACTERISTICS AT TIME OF DISPOSAL.

WASTE MANAGEMENT:

DISPOSE OF WASTE BY SUPERVISED INCINERATION IN COMPLIANCE WITH APPLICABLE LAWS AND REGULATIONS.

***** SPECIAL PROTECTION INFORMATION *****
EYE PROTECTION:

NO SPECIAL EQUIPMENT REQUIRED.

SKIN PROTECTION:

NO SPECIAL EQUIPMENT REQUIRED. HOWEVER, GOOD PERSONAL HYGIENE PRACTICES SHOULD ALWAYS BE FOLLOWED.

RESPIRATORY PROTECTION:

NO SPECIAL REQUIREMENTS UNDER ORDINARY CONDITIONS OF USE AND WITH ADEQUATE VENTILATION.

VENTILATION:

NO SPECIAL REQUIREMENTS UNDER ORDINARY CONDITIONS OF USE AND WITH ADEQUATE VENTILATION.

OTHER:

***** SPECIAL PRECAUTIONS *****
HANDLING: NO SPECIAL PRECAUTIONS REQUIRED.

***** TOXICOLOGICAL DATA *****

ACUTE

ORAL TOXICITY: (RATS)

LD50: > 15 G/KG NONTOKIC(ESTIMATED) ---BASED ON TESTING OF
SIMILAR PRODUCTS AND/OR THE COMPONENTS.

DERMAL TOXICITY: (RAHBITS)

LD50: > 8 G/KG NONTOKIC(ESTIMATED) ---BASED ON TESTING OF SIMILAR
PRODUCTS AND/OR THE COMPONENTS.

INHALATION TOXICITY: (RATS)

NOT APPLICABLE ---HARMFUL CONCENTRATIONS OF MISTS AND/OR VAPORS
ARE UNLIKELY TO BE ENCOUNTERED THROUGH ANY CUSTOMARY OR REASONABLY
FORESEEABLE HANDLING, USE, OR MISUSE OF THIS PRODUCT.

EYE IRRITATION: (RABBITS)

EXPECTED TO BE NON-IRRITATING. ---BASED ON TESTING OF SIMILAR
PRODUCTS AND/OR THE COMPONENTS.

SKIN IRRITATION: (RAHBITS)

MAY CAUSE SLIGHT IRRITATION ON PROLONGED OR REPEATED CONTACT.
---BASED ON TESTING OF SIMILAR PRODUCTS AND/OR THE COMPONENTS.

SUBACUTE AND MUTAGENICITY (SUMMARY)

CHRONIC OR SPECIALIZED (SUMMARY)

OTHER DATA

FILE CODES:

(FILL NO: MTN4504J05) MHC: 0* 0* NA 0* 1* US82-062NONE

8215

ENVIRONMENTAL AFFAIRS AND TOXICOLOGY DEPT.

MANAGER OF PRODUCT SAFETY INFORMATION, PHONE:(212)883-5594

APPROVE

REVISED:

6/28/82

MOBIL MATERIAL SAFETY DATA BULLETIN

MOBIL OIL CORPORATION
ENVIRONMENTAL AFFAIRS AND TOXICOLOGY DEPT.

150 EAST 42ND STREET
NEW YORK, N.Y. 10017 (USA)

***** PRODUCT IDENTIFICATION *****
MOBILARMA 524

SUPPLIER:
MOBIL OIL CORP.
CHEMICAL NAMES AND SYNONYMS:
PET. HYDROCARBONS AND ADDITIVES
USE OR DESCRIPTION:
RUST PREVENTIVE

HEALTH EMERGENCY TELEPHONE:
(212)883-4411
TRANSPORT EMERGENCY TELEPHONE:
(800)424-9300 (CHEMTREC)
OTHER DESIGNATION:
(TRN 667139)

***** TYPICAL CHEMICAL AND PHYSICAL PROPERTIES *****

APPEARANCE:	VISCOSITY: AT 100 F, SUS	AT 40 C, CS
ASTM 5.0 LIQUID	460.0	88.4
ODOR:	VISCOSITY: AT 210 F, SUS	AT 100 C, CS
MILD	61.5	10.4
RELATIVE DENSITY: 15/4 C	SOLUBILITY IN WATER:	PH:
0.884	NEGLIGIBLE	NA
MELTING POINT: F(C)	POUR POINT: F(C)	
NA	0(-18)	
BOILING POINT: F(C)	FLASH POINT: F(C) (METHOD)	
>600(316)	425(218) (OPEN CUP)	
VAPOR PRESSURE:MM HG 20C		
< .1		

NA=NOT APPLICABLE NE=NOT ESTABLISHED D=DECOMPOSES

***** INGREDIENTS *****

WT PCT	TLV(TWA):	MG/M3	PPM
(APPROX)			

HAZARDOUS INGREDIENTS:
NONE

NON-HAZARDOUS INGREDIENTS:
REFINED MINERAL OILS > 90
ADDITIVES AND/OR OTHER INGREDIENTS < 10

NOTE: TLVS SHOWN FOR GUIDANCE ONLY. FOLLOW APPLICABLE REGULATIONS.

INFORMATION GIVEN HEREIN IS OFFERED IN GOOD FAITH AS ACCURATE, BUT WITHOUT GUARANTEE. CONDITIONS OF USE AND SUITABILITY OF THE PRODUCT FOR PARTICULAR USES ARE BEYOND OUR CONTROL; ALL RISKS OF USE OF THE PRODUCT ARE THEREFORE ASSUMED BY THE USER AND WE EXPRESSLY DISCLAIM ALL WARRANTIES OF EVERY KIND AND NATURE, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE IN RESPECT TO THE USE OR SUITABILITY OF THE PRODUCT. NOTHING IS INTENDED AS A RECOMMENDATION FOR USES WHICH INFRINGE VALID PATENTS OR AS EXTENDING LICENSE UNDER VALID PATENTS. APPROPRIATE WARNINGS AND SAFE HANDLING PROCEDURES SHOULD BE PROVIDED TO HANDLERS AND USERS.

***** FIRE AND EXPLOSION HAZARD DATA *****

FLASH POINT: F(C) (METHOD) 425(218) (OPEN CUP) FLAMMABLE LIMITS: LEL NE UEL NE
EXTINGUISHING MEDIA: CO2, FOAM, DRY CHEMICAL
SPECIAL FIRE FIGHTING PROCEDURES:
FIREFIGHTERS MUST USE SELF-CONTAINED BREATHING APPARATUS.

UNUSUAL FIRE AND EXPLOSION HAZARDS:
NONE

***** HEALTH HAZARD DATA *****

THRESHOLD LIMIT VALUE: (IF ESTABLISHED)
5.00 MG/M3 SUGGESTED FOR OIL MIST
EFFECTS OF OVEREXPOSURE:
NOT EXPECTED TO BE A PROBLEM.

***** EMERGENCY AND FIRST AID PROCEDURES *****

EYE CONTACT:
FLUSH WITH WATER.

SKIN CONTACT:
WASH CONTACT AREAS WITH SOAP AND WATER.

INHALATION:
NOT EXPECTED TO BE A PROBLEM.

INGESTION:
NOT EXPECTED TO BE A PROBLEM WHEN INGESTED. IF UNCOMFORTABLE
SEEK MEDICAL ASSISTANCE.

***** REACTIVITY DATA *****

STABILITY: (THERMAL, LIGHT, ETC.) CONDITIONS TO AVOID:
STABLE STRONG OXIDATION

INCOMPATIBILITY: (MATERIALS TO AVOID)
STRONG OXIDIZERS

HAZARDOUS DECOMPOSITION PRODUCTS:
CARBON MONOXIDE.

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR CONDITIONS TO AVOID:

***** SPILL OR LEAK PROCEDURE *****
ENVIRONMENTAL IMPACT:

REPORT SPILLS AS REQUIRED TO APPROPRIATE AUTHORITIES. U. S. COAST GUARD REGULATIONS REQUIRE IMMEDIATE REPORTING OF SPILLS THAT COULD REACH ANY WATERWAY INCLUDING INTERMITTENT DRY CREEKS. REPORT SPILL TO COAST GUARD TOLL FREE NUMBER 800-424-8802.

PROCEDURES IF MATERIAL IS RELEASED OR SPILLED:

ADSORB ON FIRE RETARDANT TREATED SAWDUST, DIATOMACEOUS EARTH, ETC. SCRAPE UP AND REMOVE. DISPOSE OF AT AN APPROPRIATE WASTE DISPOSAL FACILITY IN ACCORDANCE WITH CURRENT APPLICABLE LAWS AND REGULATIONS, AND PRODUCT CHARACTERISTICS AT TIME OF DISPOSAL.

WASTE MANAGEMENT:

DISSOLVE WASTE IN A SOLVENT AND DISPOSE BY SUPERVISED INCINERATION IN COMPLIANCE WITH APPLICABLE LAWS AND REGULATIONS.

***** SPECIAL PROTECTION INFORMATION *****
EYE PROTECTION:

NO SPECIAL EQUIPMENT REQUIRED.

SKIN PROTECTION:

NO SPECIAL EQUIPMENT REQUIRED. HOWEVER, GOOD PERSONAL HYGIENE PRACTICES SHOULD ALWAYS BE FOLLOWED.

RESPIRATORY PROTECTION:

NO SPECIAL REQUIREMENTS UNDER ORDINARY CONDITIONS OF USE AND WITH ADEQUATE VENTILATION.

VENTILATION:

NO SPECIAL REQUIREMENTS UNDER ORDINARY CONDITIONS OF USE AND WITH ADEQUATE VENTILATION.

OTHER:

***** SPECIAL PRECAUTIONS *****
HANDLING: NO SPECIAL PRECAUTIONS REQUIRED.

***** TOXICOLOGICAL DATA *****

ACUTE

ORAL TOXICITY: (RATS)

LD50: > 15 G/KG NONTOXIC(ESTIMATED) ---BASED ON TESTING OF
SIMILAR PRODUCTS AND/OR THE COMPONENTS.

DERMAL TOXICITY: (RABBITS)

LD50: > 5 G/KG NONTOXIC(ESTIMATED) ---BASED ON TESTING OF SIMILAR
PRODUCTS AND/OR THE COMPONENTS.

INHALATION TOXICITY: (RATS)

NOT APPLICABLE ---HARMFUL CONCENTRATIONS OF MISTS AND/OR VAPORS
ARE UNLIKELY TO BE ENCOUNTERED THROUGH ANY CUSTOMARY OR REASONABLY
FORESEEABLE HANDLING, USE, OR MISUSE OF THIS PRODUCT.

EYE IRRITATION: (RABBITS)

EXPECTED TO BE NON-IRRITATING. ---BASED ON TESTING OF SIMILAR
PRODUCTS AND/OR THE COMPONENTS.

SKIN IRRITATION: (RABBITS)

EXPECTED TO BE NON-IRRITATING. ---BASED ON TESTING OF SIMILAR
PRODUCTS AND/OR THE COMPONENTS.

SUBACUTE AND MUTAGENICITY (SUMMARY)

CHRONIC OR SPECIALIZED (SUMMARY)

OTHER DATA

FILE CODES:

MHC: J* J* NA J* G*

APPROVE 7611

ENVIRONMENTAL AFFAIRS AND TOXICOLOGY DEPT.
MANAGER OF PRODUCT SAFETY INFORMATION, PHONE: (212) 883-5594

REVISED:
11/ 1/80

MOBIL MATERIAL SAFETY DATA BULLETIN

MOBIL OIL CORPORATION
ENVIRONMENTAL AFFAIRS AND TOXICOLOGY DEPT.

150 EAST 42ND STREET
NEW YORK, N.Y. 10017 (USA)

***** PRODUCT IDENTIFICATION *****
MOBILARMA 355

SUPPLIER:	HEALTH EMERGENCY TELEPHONE:
MOBIL OIL CORP.	(212)883-4411
CHEMICAL NAMES AND SYNONYMS:	TRANSPORT EMERGENCY TELEPHONE:
PET. HYDROCARBONS AND ADDITIVES	(800)424-9300 (CHEMTREC)
USE OR DESCRIPTION:	OTHER DESIGNATION:
RUST PREVENTIVE	(TRN 667055)

***** TYPICAL CHEMICAL AND PHYSICAL PROPERTIES *****

APPEARANCE:	VISCOSITY: AT 100 F, SUS	AT 40 C, CS
ASTM 3.5 SEMI-SOLID	NE	NE
ODOR:	VISCOSITY: AT 210 F, SUS	AT 100 C, CS
MILD	100.0	8.5
RELATIVE DENSITY: 15/4 C	SOLUBILITY IN WATER:	PH:
0.87	NEGLIGIBLE	NA
MELTING POINT: F(C)	POUR POINT: F(C)	
NA	NE	
BOILING POINT: F(C)	FLASH POINT: F(C) (METHOD)	
>600(316)	370(188) (ASTM D-92)	
VAPOR PRESSURE:MM HG 20C		
< .1		

NA=NOT APPLICABLE NE=NOT ESTABLISHED D=DECOMPOSES

***** INGREDIENTS *****

WT PCT	TLV(TWA):	MG/M3	PPM
(APPROX)			

HAZARDOUS INGREDIENTS:
NONE

NON-HAZARDOUS INGREDIENTS:

REFINED MINERAL OILS	< 40
PETROLATUMS	> 55
ADDITIVES AND/OR OTHER INGREDIENTS.	< 5

NOTE: TLVS SHOWN FOR GUIDANCE ONLY. FOLLOW APPLICABLE REGULATIONS.

INFORMATION GIVEN HEREIN IS OFFERED IN GOOD FAITH AS ACCURATE, BUT WITHOUT GUARANTEE. CONDITIONS OF USE AND SUITABILITY OF THE PRODUCT FOR PARTICULAR USES ARE BEYOND OUR CONTROL; ALL RISKS OF USE OF THE PRODUCT ARE THEREFORE ASSUMED BY THE USER AND WE EXPRESSLY DISCLAIM ALL WARRANTIES OF EVERY KIND AND NATURE, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE IN RESPECT TO THE USE OR SUITABILITY OF THE PRODUCT. NOTHING IS INTENDED AS A RECOMMENDATION FOR USES WHICH INFRINGE VALID PATENTS OR AS EXTENDING LICENSE UNDER VALID PATENTS. APPROPRIATE WARNINGS AND SAFE HANDLING PROCEDURES SHOULD BE PROVIDED TO HANDLERS AND USERS.

***** FIRE AND EXPLOSION HAZARD DATA *****

FLASH POINT: F(C) (METHOD) FLAMMABLE LIMITS: LEL UEL
370(188) (ASTM D-92) .6 7.0

EXTINGUISHING MEDIA:

CARBON DIOXIDE, FOAM, DRY CHEMICAL AND WATER FOG.

SPECIAL FIRE FIGHTING PROCEDURES:

FIREFIGHTERS MUST USE SELF-CONTAINED BREATHING APPARATUS.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

NONE

***** HEALTH HAZARD DATA *****

THRESHOLD LIMIT VALUE: (IF ESTABLISHED)

EFFECTS OF OVEREXPOSURE:

SLIGHT SKIN IRRITATION.

***** EMERGENCY AND FIRST AID PROCEDURES *****

EYE CONTACT:

FLUSH WITH WATER.

SKIN CONTACT:

WASH CONTACT AREAS WITH SOAP AND WATER.

INHALATION:

NOT EXPECTED TO BE A PROBLEM.

INGESTION:

NOT EXPECTED TO BE A PROBLEM. HOWEVER, IF GREATER THAN 1/2 LITER (PINT) INGESTED, IMMEDIATELY GIVE 1 TO 2 GLASSES OF WATER AND CALL A PHYSICIAN, HOSPITAL EMERGENCY ROOM OR POISON CONTROL CENTER FOR ASSISTANCE. DO NOT INDUCE VOMITING OR GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON.

***** REACTIVITY DATA *****

STABILITY: (THERMAL, LIGHT, ETC.) CONDITIONS TO AVOID:

STABLE EXTREME HEAT

INCOMPATIBILITY: (MATERIALS TO AVOID)

STRONG OXIDIZERS

HAZARDOUS DECOMPOSITION PRODUCTS:

CARBON MONOXIDE.

HAZARDOUS POLYMERIZATION:

WILL NOT OCCUR

CONDITIONS TO AVOID:

***** SPILL OR LEAK PROCEDURE *****
ENVIRONMENTAL IMPACT:

REPORT SPILLS AS REQUIRED TO APPROPRIATE AUTHORITIES. U. S. COAST GUARD REGULATIONS REQUIRE IMMEDIATE REPORTING OF SPILLS THAT COULD REACH ANY WATERWAY INCLUDING INTERMITTENT DRY CREEKS. REPORT SPILL TO COAST GUARD TOLL FREE NUMBER 800-424-8802.

PROCEDURES IF MATERIAL IS RELEASED OR SPILLED:

SCRAPE UP AND REMOVE. DISPOSE OF AT AN APPROPRIATE WASTE DISPOSAL FACILITY IN ACCORDANCE WITH CURRENT APPLICABLE LAWS AND REGULATIONS, AND PRODUCT CHARACTERISTICS AT TIME OF DISPOSAL.

WASTE MANAGEMENT:

DISSOLVE WASTE IN A SOLVENT AND DISPOSE BY SUPERVISED INCINERATION IN COMPLIANCE WITH APPLICABLE LAWS AND REGULATIONS.

***** SPECIAL PROTECTION INFORMATION *****

EYE PROTECTION:

NO SPECIAL EQUIPMENT REQUIRED.

SKIN PROTECTION:

IF PROLONGED OR REPEATED SKIN CONTACT IS LIKELY, OIL IMPERVIOUS GLOVES SHOULD BE WORN. GOOD PERSONAL HYGIENE PRACTICES SHOULD ALWAYS BE FOLLOWED.

RESPIRATORY PROTECTION:

NO SPECIAL REQUIREMENTS UNDER ORDINARY CONDITIONS OF USE AND WITH ADEQUATE VENTILATION.

VENTILATION:

NO SPECIAL REQUIREMENTS UNDER ORDINARY CONDITIONS OF USE AND WITH ADEQUATE VENTILATION.

OTHER:

***** SPECIAL PRECAUTIONS *****

HANDLING: NO SPECIAL PRECAUTIONS REQUIRED.

***** TOXICOLOGICAL DATA *****

ACUTE

ORAL TOXICITY: (RATS)

0/10 RATS DIED AT THIS DOSAGE LEVEL. SLIGHTLY TOXIC

DERMAL TOXICITY: (RABBITS)

0/10 RABBITS DIED AT THIS DOSAGE LEVEL. SLIGHTLY TOXIC

INHALATION TOXICITY: (RATS)

NOT APPLICABLE ---HARMFUL CONCENTRATIONS OF MISTS AND/OR VAPORS
ARE UNLIKELY TO BE ENCOUNTERED THROUGH ANY CUSTOMARY OR REASONABLY
FORESEEABLE HANDLING, USE, OR MISUSE OF THIS PRODUCT.

EYE IRRITATION: (RABBITS)

CAUSED NO SIGNIFICANT IRRITATION TO RABBITS.

SKIN IRRITATION: (RABBITS)

SLIGHTLY IRRITATING TO RABBITS. PRIMARY IRRITATION SCORE: .4/8

SUBACUTE AND MUTAGENICITY (SUMMARY)

CHRONIC OR SPECIALIZED (SUMMARY)

OTHER DATA

FILE CODES:

(FILL NO: TSD330001) MHC: 1 1 NA 0 1 US83-031E 321-74 APPROVE

8504

ENVIRONMENTAL AFFAIRS AND TOXICOLOGY DEPT.

REVISED:

MANAGER OF PRODUCT SAFETY INFORMATION, PHONE: (212) 983-5594

4/13/83

Mobil

665992 PAGE 1

MOBIL MATERIAL SAFETY DATA BULLETIN

MOBIL OIL CORPORATION
ENVIRONMENTAL AFFAIRS AND TOXICOLOGY DEPT.

150 EAST 42ND STREET
NEW YORK, N.Y. 10017 (USA)

***** PRODUCT IDENTIFICATION *****
MOBILMET NU

SUPPLIER:
MOBIL OIL CORP.
CHEMICAL NAMES AND SYNONYMS:
PET. HYDROCARBONS AND ADDITIVES
USE OR DESCRIPTION:
CUTTING FLUID

HEALTH EMERGENCY TELEPHONE:
(212)883-4411
TRANSPORT EMERGENCY TELEPHONE:
(800)424-9300 (CHEMTREC)
OTHER DESIGNATION:
(TRN 665992)

***** TYPICAL CHEMICAL AND PHYSICAL PROPERTIES *****

APPEARANCE: ASTM 8.0 LIQUID	VISCOSITY: AT 100 F. SUS 187.0	AT 40 C. CS 37.0
ODOR: MILD	VISCOSITY: AT 210 F. SUS 48.0	AT 100 C. CS 6.4
RELATIVE DENSITY: 15/4 C 0.884	SOLUBILITY IN WATER: NEGLECTIBLE	PH: NA
MELTING POINT: F(C) NA	POUR POINT: F(C) -5(-21)	
BOILING POINT: F(C) >600(316)	FLASH POINT: F(C) (METHOD) >360(182) (ASTM D-92)	
VAPOR PRESSURE:MM HG 20C < .1		

NA=NOT APPLICABLE NE=NOT ESTABLISHED D=DECOMPOSES

***** INGREDIENTS *****

WT PCT (APPROX)	TLV(TWA):	MG/M3	PPM
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HAZARDOUS INGREDIENTS:
NONE

NON-HAZARDOUS INGREDIENTS:
REFINED MINERAL OILS > 85
ADDITIVES AND/OR OTHER INGREDIENTS. < 15
CHLORINATED PARAFFIN WAX < 5

NOTE: TLVS SHOWN FOR GUIDANCE ONLY. FOLLOW APPLICABLE REGULATIONS.

INFORMATION GIVEN HEREIN IS OFFERED IN GOOD FAITH AS ACCURATE, BUT WITHOUT GUARANTEE. CONDITIONS OF USE AND SUITABILITY OF THE PRODUCT FOR PARTICULAR USES ARE BEYOND OUR CONTROL; ALL RISKS OF USE OF THE PRODUCT ARE THEREFORE ASSUMED BY THE USER AND WE EXPRESSLY DISCLAIM ALL WARRANTIES OF EVERY KIND AND NATURE, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE IN RESPECT TO THE USE OR SUITABILITY OF THE PRODUCT. NOTHING IS INTENDED AS A RECOMMENDATION FOR USES WHICH INFRINGE VALID PATENTS OR AS EXTENDING LICENSE UNDER VALID PATENTS. APPROPRIATE WARNINGS AND SAFE HANDLING PROCEDURES SHOULD BE PROVIDED TO HANDLERS AND USERS.

Mobil

MOBILMET NU

665992

PAGE 2

***** FIRE AND EXPLOSION HAZARD DATA *****

FLASH POINT: F(C) (METHOD) FLAMMABLE LIMITS: LEL UEL
> 360(182) (ASTM D-92) .6 7.0
EXTINGUISHING MEDIA:
CARBON DIOXIDE, FOAM, DRY CHEMICAL AND WATER FOG.
SPECIAL FIRE FIGHTING PROCEDURES:
FIREFIGHTERS MUST USE SELF-CONTAINED BREATHING APPARATUS.

UNUSUAL FIRE AND EXPLOSION HAZARDS:
NONE

***** HEALTH HAZARD DATA *****

THRESHOLD LIMIT VALUE: (IF ESTABLISHED)
5.00 MG/M3 SUGGESTED FOR OIL MIST
EFFECTS OF OVEREXPOSURE:
SLIGHT SKIN IRRITATION.

***** EMERGENCY AND FIRST AID PROCEDURES *****

EYE CONTACT:
FLUSH WITH WATER.

SKIN CONTACT:
WASH CONTACT AREAS WITH SOAP AND WATER.

INHALATION:
NOT EXPECTED TO BE A PROBLEM.

INGESTION:
NOT EXPECTED TO BE A PROBLEM. HOWEVER, IF GREATER THAN 1/2 LITER(PINT) INGESTED, IMMEDIATELY GIVE 1 TO 2 GLASSES OF WATER AND CALL A PHYSICIAN, HOSPITAL EMERGENCY ROOM OR POISON CONTROL CENTER FOR ASSISTANCE. DO NOT INDUCE VOMITING OR GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON.

***** REACTIVITY DATA *****

STABILITY: (THERMAL, LIGHT, ETC.) CONDITIONS TO AVOID:
STABLE EXTREME HEAT

INCOMPATIBILITY: (MATERIALS TO AVOID)
STRONG OXIDIZERS

HAZARDOUS DECOMPOSITION PRODUCTS:
CARBON MONOXIDE.

HAZARDOUS POLYMERIZATION: CONDITIONS TO AVOID:
WILL NOT OCCUR

***** SPILL OR LEAK PROCEDURE *****
ENVIRONMENTAL IMPACT:

REPORT SPILLS AS REQUIRED TO APPROPRIATE AUTHORITIES. U. S. COAST GUARD REGULATIONS REQUIRE IMMEDIATE REPORTING OF SPILLS THAT COULD REACH ANY WATERWAY INCLUDING INTERMITTENT DRY CREEKS. REPORT SPILL TO COAST GUARD TOLL FREE NUMBER 800-424-8802.

PROCEDURES IF MATERIAL IS RELEASED OR SPILLED:

ABSORB ON FIRE RETARDANT TREATED SANDUST, DIATOMACEOUS EARTH, ETC. SHOVEL UP AND DISPOSE OF AT AN APPROPRIATE WASTE DISPOSAL FACILITY IN ACCORDANCE WITH CURRENT APPLICABLE LAWS AND REGULATIONS, AND PRODUCT CHARACTERISTICS AT TIME OF DISPOSAL.

WASTE MANAGEMENT:

DISSOLVE WASTE IN A SOLVENT AND DISPOSE BY SUPERVISED INCINERATION IN COMPLIANCE WITH APPLICABLE LAWS AND REGULATIONS.

***** SPECIAL PROTECTION INFORMATION *****

EYE PROTECTION:

NO SPECIAL EQUIPMENT REQUIRED.

SKIN PROTECTION:

NO SPECIAL EQUIPMENT REQUIRED. HOWEVER, GOOD PERSONAL HYGIENE PRACTICES SHOULD ALWAYS BE FOLLOWED.

RESPIRATORY PROTECTION:

NO SPECIAL REQUIREMENTS UNDER ORDINARY CONDITIONS OF USE AND WITH ADEQUATE VENTILATION.

VENTILATION:

NO SPECIAL REQUIREMENTS UNDER ORDINARY CONDITIONS OF USE AND WITH ADEQUATE VENTILATION.

OTHER:

***** SPECIAL PRECAUTIONS *****

HANDLING: NO SPECIAL PRECAUTIONS REQUIRED.

***** TOXICOLOGICAL DATA *****

ACUTE

ORAL TOXICITY: (RATS)

SLIGHTLY TOXIC (ESTIMATED) ---BASED ON TESTING OF SIMILAR PRODUCTS
AND/OR THE COMPONENTS.

DERMAL TOXICITY: (RABBITS)

NONTOXIC (ESTIMATED) ---BASED ON TESTING OF SIMILAR PRODUCTS AND/OR
THE COMPONENTS.

INHALATION TOXICITY: (RATS)

NONTOXIC (ESTIMATED) ---BASED ON TESTING OF SIMILAR PRODUCTS AND/OR
THE COMPONENTS.

EYE IRRITATION: (RABBITS)

EXPECTED TO BE NON-IRRITATING. ---BASED ON TESTING OF SIMILAR
PRODUCTS AND/OR THE COMPONENTS.

SKIN IRRITATION: (RABBITS)

MAY CAUSE SLIGHT IRRITATION ON PROLONGED OR REPEATED CONTACT.
---BASED ON TESTING OF SIMILAR PRODUCTS AND/OR THE COMPONENTS.

SUBACUTE AND MUTAGENICITY (SUMMARY)

CHRONIC OR SPECIALIZED (SUMMARY)

OTHER DATA

FILE CODES:

(FILL NO: MTJ338001) MHC: 1* 0* 0* 0* 1* US83-003NONE

8504

ENVIRONMENTAL AFFAIRS AND TOXICOLOGY DEPT.

MANAGER OF PRODUCT SAFETY INFORMATION, PHONE: (212) 883-5594

APPROVE

REVISED:

4/13/83